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Educational News and Editorial Comment

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Are the Colleges Good Shepherds to Their Sheep?

In recent years the American college has been the subject of much vigorous discussion and pointed criticism. Its traditional goals have been challenged, many persons are discontented with its program of instruction, and its structural organization is undergoing a fundamental reorganization. To the most casual observer, higher education in this country is seen to be in a process of transformation; it is being torn from its old moorings; it is striving to attain orientation amidst the shifting currents of American life.

The college originated in a society characterized by sharp class distinctions, and for centuries it served primarily the interests of the directive classes. Nor did it lose its aristocratic traditions when it was transplanted to American soil. The founders of Harvard College were not unmindful of the fact that it could be used as an instrument of social control, and at a later date New England merchants and southern planters were willing to join the clergy in the support of a system of higher education which would contribute to the continuance of the existing order. So long as the essential purpose of the college was the pre-professional preparation of a select group of young men to enter one or another of the professions or the training of a few leaders for industry and commerce, the organization of

the content of instruction presented no great difficulty. For many years, however, the old pattern of the college has been undergoing modification as a result of a new order of things; there is no longer any commonly accepted concept of the function of the college or of the precise means by which its ends may be accomplished. The old mold has been broken by the change of attitude toward mental discipline, by the vast accumulation of new knowledge, and, most of all, by the needs and the interests of the new constituency which economic and social change has thrust into college classrooms.

Of the forces that beat upon the college from without and multiply its perplexities, two are of outstanding importance. The first of these is the democratization of higher education. It is an amazing fact that in 1930 enrolments in the collegiate departments of universities, colleges, professional schools, and junior colleges were more than eleven times as great as the enrolments in these institutions in 1890. More students were enrolled in these collegiate departments in 1930 than were in attendance in secondary schools in 1900. Social forces playing upon the college from without, forces over which presidents and deans have no immediate nor direct control, are thrusting into college classrooms an increasing stream of young men and women with almost every conceivable cultural background, with varying interests and capacities, and with expectations of engaging in all the types of activities in which people engage in their mature years. This new constituency constitutes a challenge to the American college. This challenge will not be met by the administration of a "liberal education" which has not lost entirely its aristocratic hallmarks and which is still rather much a pre-professional program.

The second force beating upon the college from without and requiring reconsideration of its goals is the changing nature of the world that youth must face. The contract which successful living makes with youth today contains important new specifications: it requires new qualities of intelligence and of personality; it demands a wider grasp of the essential elements of human experience; and, above all, it requires qualities of adjustment and adaptation. The impact of invention and technology on our economy is forcing a reconstruction of many, if not most, of our institutional forms. The democratic

state, if it is to survive in the modern world, must cultivate the spirit of political experiment, invention, and contrivance. To participate wisely in the determination of public policy today requires a social insight far deeper than that required to direct the destinies of a simple rural economy such as ours was a generation or two ago. Nor is the need for experiment and invention any less in the area of economics than in the area of politics. In the whole area of human relations, whether of government, economy, or ethics, we are faced with the necessity of adaptation and adjustment. If the youth of this and the next generation are to meet their responsibility for the successful operation of the national economy, for improving the quality of individual living, and for advancing the level of the common culture, they will have to cultivate a greater breadth and comprehensiveness of thought than is usually found in the college today.

For many years to come, the college will be striving for a new orientation, and, as new plan follows new plan in the process of experimentation, there will be much uncertainty and not a little confusion. In the meantime what will happen to the students? Will a large percentage of them be caught between the upper and the lower millstones of the old and the new order of things? Or will the colleges be able to work out an adequate program of guidance and adopt policies designed to safeguard human values?

In this connection a report prepared by Everett W. Lord, dean of the College of Business Administration of Boston University, is of particular interest. The report was prepared for Alpha Kappa Psi Fraternity and is entitled "Student Persistence in American Colleges." The data presented in the report were drawn from 266 colleges throughout the United States.

They raise pointedly the question whether the colleges are properly meeting their responsibility to the young men and women whom they permit to enrol as students. The major conclusions reached by Dean Lord are quoted in the following paragraphs.

Nearly half of the students admitted to colleges in the United States fail to complete the course: that is, of approximately 300,000 annually beginning a college course, about 60,000 drop out in or at the end of their Freshman year; 44,000 the second year; 15,000 the third year; and 19,000 in the fourth year. Making allowance for the small number who are allowed to return or who succeed in gaining entrance to another college and completing a course there, it is

safe to say that at least 130,000 end their advanced studies before completing the prescribed course.

It is reasonable to suppose that three years, or two, or even one year of college may be beneficial, although for that large percentage who have failed to measure up to college standards the benefit may be questionable. The 25,000 actually dismissed and the probably equal number discouraged by scholastic difficulties may well be worse off for having begun and failed. Few of them can enter another school, and they are not wanted by employers. They have learned to distrust their own abilities. Their plight is deplorable, even when they are wholly at fault for it—when the failure is due to neglect of work rather than to lack of ability. But in a vast number of cases, the college is at fault. The student should not have been admitted in the first place; once admitted, he should have had wiser and more efficient guidance. This is a responsibility which the college has no right to shirk.

For the thousands who withdraw because of financial difficulties there need be less concern. These young people are likely to have profited by as much of the college course as they have taken, and they have no onus of failure to overcome. They may be able to return later, or to go to another college, and their record is no bar to desirable employment. Yet for them, too, the college has a responsibility which is not always recognized. Perhaps they can be helped with programs of study not requiring class attendance, but supervised by the college: perhaps they can be directed to inexpensive courses of study or given substantial reading courses. Certainly they should be regarded as alumni of the college, and assured of its continued interest in their welfare.

The size of the college has little bearing upon the mortality of the student body: but in the larger colleges a student is more likely to be dropped after more than three years of attendance.

Not all our colleges have adequate records of their student body. It is not enough to know only the grades that students have received: there should be records of a more personal nature, a closer relationship between the college and the student, a warmer feeling of sympathy for the young people who look to the college as a real Alma Mater. Only when this attitude can be maintained can the present loss to society be reduced to a minimum, and the weakening of moral fiber of thousands of our ambitious young people be prevented.

The good shepherd cannot be satisfied with the ninety-nine who are safe in the fold: he must seek the one who is lost.

Labor's Attitude toward Federal Aid to Education

In a recent issue of the *American Federationist*, the official journal of the American Federation of Labor, William Green makes the following statement with respect to the attitude of the federation toward federal aid to education.

More than a century ago our nation declared for a public-school system. Organized labor was a leader in that movement. Workers of that day wanted equal educational opportunities for their children who were to become the voters of the next decades. Organized labor is again at the head of a movement to provide the means to make possible equal educational opportunities for all in conformity with the best standards.

As a nation we have to think of our citizens as a whole not as citizens of the several states. Workers move freely from one state to another following their jobs or seeking employment. No state or section can be sure of a uniformly educated citizenry unless there is uniformity of opportunity throughout the nation. Federal allotments to states where low local incomes have deprived children of educational opportunities equal to those of more prosperous states, are essential for assuring anything like real equality of educational opportunity as a basis for democratic government and way of life.

A legislative proposal for this purpose was introduced in the last session of Congress and will be considered in the coming session. This measure follows recommendations of the President's Advisory Committee on Education which came into being as a result of labor's demands. Mistakes and abuses with respect to vocational education roused our indignation to petition for redress. The result was an Advisory Committee on Vocational Education which found it impossible to make recommendations with regard to that field without considering all of education. The President widened the scope of the committee's inquiry and made it responsible for recommendations for the whole field. In the main, labor concurs in the committee's findings and in sponsoring the bill to put them into effect. . . . .

Labor believes federal aid to state educational plans is the most important move toward real equality of educational opportunity for all.

A Program for the Improvement of Teaching

The Commission on Teacher Education, established early in 1938 by the American Council on Education, will devote its energies and resources to the improvement of teaching in the schools of the nation. According to announced plans, all aspects of teacher education will be studied, and attention will be paid to the continued education of teachers on the job as well as to the preparation of teachers. Nation-wide co-operation of various types of higher institutions preparing teachers, of state officers of education and local school authorities, and of leading educational associations will be stressed. Fifteen collegiate institutions and fifteen school systems will be invited within the next few months to work especially closely with the commission. These groups will be asked, and helped, to

experiment vigorously according to their own plans and to collect and report evidence of the results of such experiments. The General Education Board has made available $320,000 to carry out this phase of the commission's work.

Karl W. Bigelow, director of the Commission on Teacher Education, has made the following statement with regard to the commission's plans.

The Commission on Teacher Education believes that the educational experiences to be provided for teachers, both during and after the period of their professional preparation, should be planned with due regard for all their needs. This view points in the direction of functional programs, in which elements of general and of professional education are integrated. But the problems as they actually present themselves—problems of selection and of guidance, as well as of curriculum-making—vary from situation to situation; moreover, the knowledge which is possessed regarding these problems is still imperfect. The commission takes the position, consequently, that it can best perform its function by encouraging those groups actually working with teachers in making the completest possible use of the best that is now known regarding teacher education and in experimenting intelligently on the basis of new and promising hypotheses. It will offer opportunities for the sharing of experiences and for the obtaining of expert counsel, and will seek to facilitate the efforts of various faculties and school groups to evaluate the effectiveness of their programs. It expects, however, that those programs will exhibit considerable diversity.

The fundamental purpose of the Commission on Teacher Education is, of course, to contribute to the improvement of teacher education everywhere in the United States. We hope, therefore, in carrying forward this project to be of wide service and to command the interest and support of national educational associations, state and local educational authorities, and lay groups throughout the nation. We believe that, by clearing significant information and in other ways, we can be of service to teachers' colleges, schools and colleges of education, liberal-arts colleges educating teachers, and school groups everywhere. In order to use the funds at our disposal most efficiently, however, we propose to work especially closely with a necessarily limited number of school systems and of collegiate institutions where teachers are being educated. Members of this group will be selected during the next four or five months. They will be nationally distributed, will vary as to type, and, it is expected, will be outstanding in vitality and in desire to experiment boldly. The commission will undertake to provide their representatives with opportunities for the stimulating interchange of ideas and will try to find other ways of aiding them in their efforts to appraise their problems, define their objectives, improve their programs, and test their results. It is anticipated that the activities of the cooperating colleges and school systems will be watched with deep interest by all

those concerned with teacher education, and that widely significant findings will result from their participating in the study.

One problem to which the commission has already determined to pay a good deal of attention is that of making more effectively available, for use in the education of teachers, the latest knowledge regarding the growth and development of children and adolescents. Teachers clearly need to know as much as possible about the physical, mental, and emotional aspects of growing up. There has been a great deal of important research in this area recently, and the commission is persuaded that those responsible for the education of teachers will welcome help in speeding up the process whereby the results of this research may be put to work. Daniel A. Prescott, professor of education at Rutgers University, has been put in charge of this part of the commission's program.

Education in Chile

Many factors are operative in the world today which make it highly desirable that the people of the United States cultivate a better understanding of the people of the Latin-American countries. For that reason we are quoting the following short but very clear description of certain phases of education in Chile. The statement was prepared by Esther Allen Gaw, dean of women at Ohio State University. It is quoted from the *News Bulletin* of the Institute of International Education.

In the matter of education in Chile, as elsewhere, the first question is, "Who is to be educated?" The answer is that racially there were after the Spanish conquest two original components of the present rather homogeneous population. These were the hardy Basques and the equally hardy Araucanian Indians. Some of the Spanish intermarried only with Spanish so that there is now a very limited population of almost pure Spanish lineage. Many Araucanians remained isolated and are found in relatively pure racial groups. Neither of these nor the other Indian tribes of the South constitute a very large proportion of the total population.

Since there was much intermarriage, the great part of the Chilean population until recent years was a relatively homogeneous population. In recent years there has been English, German, Italian, and some oriental and North American immigration, which is being absorbed without much effort, while making contribution to the national cultural background. Wilhelm Mann has by means of psychological tests made some investigations of the relative innate intellectual ability of those of Spanish and of Indian descent. His findings confirm other comparative investigations which show that there is no innate difference between races as such. During the past half-century Chile has rapidly developed a middle class eager for democratic opportunities. Especially during

the past ten years discriminating laws have been modified, and universal education is being attempted for all children of whatever birth. It is one thing to say that there shall be universal education and another to invent it, as any democracy knows. But Chile is making a valiant attempt to produce teachers enough and school plants enough so that in a few generations each child will have some formal schooling. In the period from 1920 to 1930 the percentage of illiteracy among children of school age was reduced from 37 per cent to 25 per cent of the total school population.

The second question to be answered is, "In what communities are the children?" There are few large cities in Chile. The people live for the most part in small villages or in the country. There are some large haciendas. Those making plans for education realize that its form and manner and content should be adapted to the needs of the children of the particular community. The group of teachers whom I met at the summer session of the University of Chile were earnestly occupied in planning the teaching so that it would be child-centered, not teacher-centered. The Chilean system of education is consciously trying to give each child an education to fit him for life, even at the same moment when the earnest endeavor of that administration is to see that each child goes to school for at least six years.

The system itself is divided into three parts very much like ours. The primary school course lasts for six years, the secondary school for another six years, then at the top the university or some of the institutes for special professions or the normal schools offer education for another four or six years. The secondary school, called *liceo* if it is a government school, or *colegio* if it is a private school, is roughly comparable to our junior college. Graduates of the secondary school may take examinations which, if passed successfully, admit to the university and also give a Bachelor's degree. The secondary schools also admit to the normal schools and many technical professional schools.

Primary and secondary schools are sometimes coeducational; the government universities, and normal schools and institutes are all coeducational. I do not know whether women are accepted in the Catholic universities, of which there are a number in Chile. A few women who wish to prepare for some profession such as law or medicine study at the university. The many who wish to become teachers enter the normal schools instead.

The University of Chile, a government institution, is excellent; many believe that it is the best in South America. North American physicians who visited the Medical School at a recent congress and who saw the laboratories and clinics report that it can take its place with A-grade medical schools in the United States.

Closely associated with formal education are various forms of adult education. The University has extension courses, the trade unions have organized classes for self-education, women's clubs have done the same, and the government plan of rural education includes the teaching of adults. Another form of

adult education comes through scientific societies, museums, and allied activities. There are national museums in the larger cities of Santiago, Valparaiso, and Concepción. There are two astronomical observatories in Santiago. There are academies and societies of language, history, geography, natural sciences, and entomology, to mention a few. There are various institutes connected with medicine and public health. These societies not only inform their members but have great influence in determining the content of educational material.

There are in existence a number of experimental schools definitely trying to solve the problem of the form and content of schooling in Chile. I visited such a primary school and such a secondary school in the city of Santiago, and understand that others are working the same way in the rural communities. The Chilean teachers know that there is poverty and ignorance; they also know that wise education is the only way to solve these problems.

Materials for Improvement of the Curriculum

The state departments of education in Alabama and Maryland have recently published bulletins which should be valuable to teachers, not only in these two states, but in other states as well. The title of the bulletin published in Alabama is *A Guide to the Improvement of the Curriculum*. Its general scope and purpose is indicated by the following quotation from the Foreword.

It seems now quite clear that fundamental changes must be made in our schools if they are to meet present demands. The curriculum must be organized about life-situations rather than about organized subject matter as such. Subject matter, the available race experience in all forms, must be made useful in school as in life elsewhere. The school must give a larger place to realities; it must develop in youth, through actual experience, greater initiative, greater willingness to accept responsibility and to face reality; greater powers of leadership, of organization, and of dealing with problems on the basis of data and objective interpretation. The curriculum must provide for individual pupils, as well as groups, upon the basis of inborn capacities, background of experience, present needs, and predictable future needs. Democracy, respect for personality, tolerance, freedom of expression, and group co-operation; the practices of healthful living, wholesome recreation, and the enjoyment of beauty—all of these elements of wholesome living—must be inherent in the school life.

This bulletin . . . . has been prepared for the purpose of helping teachers to plan and effect improvements in the directions indicated by the preceding paragraph. For those who would take definite steps toward a better program, it sets out a number of specific ways to do so. Such suggested steps include the study of children; study of the community life; the development of wholesome school life; greater participation by pupils in planning the school program; the

selection of learning units on the basis of children's needs; and the teaching of the fundamental skills in vital relationship to the other phases of the school program.

A large part of this bulletin is devoted to a presentation of illustrative units.

The Maryland bulletin is entitled *Curriculum Materials in the Social Studies for the Intermediate Grades*. Its general purpose is described as follows:

> The purpose of this bulletin is to present to the teachers and supervisors of the intermediate grades a philosophy of social studies through which they can bring together into closer relationships the instructional materials of their curriculums in history, geography, literature, civics, and health. It makes an attempt to interpret the thirteenth report of the Commission on the Social Studies, *Curriculum-making in the Social Studies* by Marshall and Goetz. It presents some concrete illustrations and suggestions for interpreting and applying this larger background of understanding of social experiences in classroom situations on the level of the child of the fourth, fifth, and sixth grades.

The first section of the bulletin is entitled "Some Suggestions for Interpreting the Social Processes in Terms of Curriculum Materials and Teaching Procedures." In the second section curriculum materials are analyzed "on the basis of the operational aspects of group living."

Useful Guides to the Study of the Community

If the work of the school is to be realistically functional, it must be tied into the life of the community at many points. Those who shape the educational policies of any given area need to know a great deal about the social conditions in the area, about the social agencies other than schools which are in some way prepared to serve children and youth, about the numbers and the kinds of jobs open to young people, about the composition and the growth of the population, about health conditions and facilities, and about numerous other matters of similar import.

Two recent publications are designed for use as guides by groups of persons desirous of gaining factual information about community conditions. The first of these, by Joanna C. Colcord, is published by the Russell Sage Foundation under the title *Your Community—Its Provision for Health, Education, Safety, and Welfare*. It suggests the type of information that might be assembled and studied in

order to supply a background from which the problem of improving the public services of the community may be attacked. Perhaps the volume will render its greatest service as a guide to sources of information. Under each topic suggested for investigation, reference is made to the readily available source materials, both in local and federal documents. The following brief quotation from the section dealing with wages is illustrative of the whole book.

> Wage rates in various occupations are only one factor in the adequacy of family earnings. Others equally important are continuity of employment, size of family, and number of gainfully employed people per family. The volume of the 1930 census reports on families gives some information on the latter points. . . . .
>
> Prevailing wage rates per hour in certain occupations are usually easy to obtain from state departments of labor, but may be published only for the state as a whole. The *Monthly Labor Review* contains annually a statement of "entrance rates" of common laborers into industry. Rates are given, by states, with differences indicated by size of city, by race, and in some instances by type of industry. Some state departments also report on average weekly earnings. In connection with this and the following section, we recommend study of *Employment Statistics for the United States* by Ralph G. Hurlin and W. A. Berridge.

The general scope of the content of the volume may be gained from some of the chapter headings: "Community Setting, Founding, and Development," "Local Government," "Provision for Dealing with Crime," "Provision for Public Safety," "Workers, Wages, and Conditions of Employment," "Provision for Health Care," "Provision for the Handicapped," "Educational Resources," "Opportunities for Recreation," and "Religious Agencies." We commend this volume to the attention of all who are interested in making a survey of a community. It may be secured from the Russell Sage Foundation, New York City, for the price of eighty-five cents.

The second publication is more limited in its scope and purpose. It is a bulletin of the American Council on Education and bears the title *How To Make a Community Youth Survey*. The bulletin, which was written by M. M. Chambers and Howard M. Bell, gives specific and detailed directions with respect to the procedures to be followed in setting up a survey, in conducting it, and in presenting the results. This publication may be procured from the American Council on Education, Washington, D.C., for twenty-five cents.

A Pattern for Organizing the Social-Studies Curriculum in the Elementary School

A wide difference of opinion exists with respect to the best means of implementing the social-studies program at the elementary-school level. In many places experimentation is going on in attempts to develop a satisfactory program, and in time, no doubt, experience will indicate with some precision the best practices to be followed. In the meantime all persons should keep an open mind and keep informed as well about what is taking place in the main centers of experimentation.

In a recent issue of the *Curriculum Journal*, Leo B. Baisden, assistant superintendent of schools, and E. P. O'Reilly, principal of the William Land Elementary School, Sacramento, California, state the case for the underlying philosophy of the Sacramento program.

In developing the Sacramento course of study over a period of several years, an attempt has been made to recognize the importance of both the social functions and the geographic and historic factors which have played so large a part in the development of our present institutions. This has not been done as a mere compromise between two conflicting viewpoints. It is a reflection rather of the conviction that both phases are essential for complete understanding. The philosophy underlying the course has been that we should seek to provide children *constant experience in dealing with social and economic facts on a functional level;* should help them to *understand and interpret the major social and economic functions of society;* should give them the *constant experience of effective participation in a democratic society;* should help them toward the goal of intelligent and sympathetic *world-citizenship*. The difficult problem is to organize a course which recognizes adequately in practice all of these phases.

The Sacramento course might be described as having essentially a *geographic sequence* and a *social functions scope*. The emphasis is on experience, understanding, and utilization of facts rather than facts as ends in themselves. The areas which form the basis of the course begin in the primary grades with the immediate and familiar and proceed to the more distant and remote—that is, from the home and community to the city and its surrounding area, to the state and its environs, to the nation, and to the world at large. The nation, the world, and all other phases of the enlarged environment are treated as an extension of the child's present environment.

The question has sometimes been asked why a sequence based on community, state, and national life was adopted rather than one based on such social functions as communication, the production of goods, etc. The decision involves questions which are at best largely a matter of opinion and judgment. It was the opinion of our committees that in many ways it is easier for children

to relate such functions as transportation and housing to existing institutions of community, state, and national life than it is for them to reverse the process and try to relate all of the factors of city, state, and national life to these functions. While a state or national boundary may be only an imaginary line, it is nevertheless one of the most potent realities in the world. The legal rights and privileges of an individual living on one side of a clump of sagebrush may be vastly different from those of another individual who happens to live on the opposite side of the clump, but across a state or national boundary. Some schools, in attempting to escape from the toils of the conventional curriculum, appear to regard it as a pedagogic crime to study the history of a state, a nation, or a people, but will spend days on the history of transportation or of some manufacturing process. The philosophy underlying the Sacramento course is that the significance of all of these things is in terms of the pupil's understanding of present-day life. If a brief study of the history of Italy will give a more intelligent basis for understanding present-day Italy, he should study Italian history; if the history of an industrial process will aid in understanding and interpreting the social significance of the process, that, too, becomes the basis for a worthy unit of work. There seems to be no valid reason for assuming that there is any essential conflict between these two approaches.

The Junior Scholastic Aptitude Test

For some years the Bureau of Research of the Secondary Education Board has been conducting experimental work with the view of developing a scholastic-aptitude test for use in Grades VII, VIII, and IX. Funds with which to carry on the experimental work were provided by the Carnegie Corporation. This test is designed to serve a function as an entrance to high school similar to that served by the Aptitude Test of the College Entrance Examination Board for entrance to college. In a brochure issued by the Secondary Education Board, the purpose of the test is described more specifically as follows:

The purpose of the Secondary Education Board, when in 1934 it began to plan the construction of the Junior Scholastic Aptitude Test, was to provide an instrument of educational guidance at the eighth-grade level similar to the Scholastic Aptitude Test proper, and, if possible, as useful and as effective. It wished to create for use in the junior high school a means of arriving at a clearer estimate of the most profitable scholastic activities for the ensuing three or four years in the case of each individual student. Elementary schools and secondary schools which were members of the Secondary Education Board felt that they needed such a tool for purposes of transfer from one school to another, for admission to the high school, for placement in the high school, and for promotion.

The test may be procured from the Educational Records Bureau, 437 West Fifty-ninth Street, New York City.

Guide to the Study of the Personality of Pupils

School principals and teachers are becoming increasingly sensitive to the need of a more thorough understanding of the personality development of their pupils. Within the past decade or so, a great deal of effort has gone into devising means of measuring personality, but as yet no wholly satisfactory instruments have been developed. A number of leaders in educational measurement have found the anecdotal record extremely valuable, especially as a supplement to test scores. This type of recording procedure has been defined as follows: "The anecdotal record is a specialized form of incidental observation. It is a description of the child's conduct and personality in terms of frequent, brief, concrete observations of the pupil made and recorded by the teacher."

A recent publication of the Educational Records Bureau on *The Nature and Use of Anecdotal Records*, written by Arthur E. Traxler, should be particularly helpful to teachers and administrators who are interested in this method of personality study. The materials in this bulletin are organized under the following major topics: "Need for Anecdotal Records," "Origin and Definition," "Characteristics of a Good Anecdote," "Situations in Which the Anecdotal Method Is Applicable," "Steps in an Anecdotal Record Plan," "Limitations and Cautions in the Preparation of Anecdotes," "Values and Uses of Anecdotal Records," "Relation of Anecdotal Records to Personality Rating and Behavior Descriptions," "Sample Anecdotes," "Summary," and "Bibliography."

The bulletin lists the following uses and values of anecdotal records which have been called especially noteworthy by writers of published articles on the subject.

1. Anecdotal records provide a variety of descriptions concerning the unconstrained behavior of pupils in diverse situations and thus contribute to an understanding of the core or basic personality pattern of each individual and of the changes in pattern.

2. They substitute specific and exact descriptions of personality for vague generalizations.

3. They direct the attention of teachers away from subject matter and class groups and toward individual pupils.

4. They stimulate teachers to use records and to contribute to them.

5. They relieve individual teachers of the responsibility of making trait ratings and provide a basis for composite ratings. Moreover, they provide a continuous record while trait ratings are usually made only at certain points in a pupil's school experience.

6. They encourage teacher interest in, and understanding of, the larger school problems that are indicated by an accumulation of anecdotes.

7. They provide the information which the counselor needs to control the conferences with individual pupils. An appropriate starting point for each conference can be found in the data, and the discussion can be kept close to the pupil's needs.

8. They provide data for pupils to use in self-appraisal. While in some cases the anecdotes should not be shown to the pupils, each pupil can profitably study the indications in many of the anecdotes about him in order to decide what he needs to do to improve.

9. Personal relationships between the pupil and the counselor are improved by anecdotal records, for these records show the pupil that the counselor is acquainted with his problems.

10. Anecdotal records aid in the formulation of individual help programs and encourage active pupil participation in remedial work.

11. They show needs for the formation of better work and study habits and also provide encouraging evidence of growth in these respects.

12. Curriculum construction, modification, and emphasis may be improved through reference to the whole volume of anecdotal record material collected by a school. The anecdotes indicate where there should be general presentation of material in character development to satisfy the needs of the whole school community.

13. An appropriate summary of anecdotes is valuable for forwarding with a pupil when he is promoted to another school.

14. Anecdotal records may be used by new members of the staff in acquainting themselves with the student body.

15. The qualitative statements contained in anecdotal records supplement and assist in the interpretation of quantitative data.

16. Collections of anecdotal records may provide the necessary validating evidence for various evaluating instruments. For instance, when the results of the Bernreuter Personality Inventory indicate that certain pupils are high in dominance and others are low, the anecdotal record material for these pupils may be analyzed to find out whether or not the Bernreuter scores agree with the observations of behavior.

17. Anecdotal records aid in clinical service. When pupils are referred to clinical workers for special study of their problems, there is great advantage in

having anecdotal records available for these highly trained workers to interpret. In this connection, Charters ("A Character Development Study," *Personnel Journal*, XII [August, 1933], 119–23) makes the following significant observation concerning the anecdotal records of the Rochester Athenaeum and Mechanics Institute: "How penetrating the accumulated emphasis of these anecdotes is was put to a test recently when a psychiatrist came to the faculty for information about a student of the class of 1933 who had been brought to him as a mild case for observation. As he and the supervisor exchanged impressions it appeared that the psychiatrist had uncovered no characteristics that were not already recorded among the anecdotes."

WHO'S WHO FOR MARCH

The authors of articles in the current issue ARTHUR I. GATES, professor of education at Teachers College, Columbia University. CARLETON WASHBURNE, superintendent of schools at Winnetka, Illinois. KNUTE O. BROADY, professor of school administration at the University of Nebraska. MAURICE L. RISEN, teacher of social studies and director of forums at Cooke Junior High School, Philadelphia, Pennsylvania. O. L. HARVEY, engaged in research in Washington, D.C. FLORENCE L. GOODENOUGH, research professor of the Institute of Child Welfare at the University of Minnesota.

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AN EXPERIMENTAL EVALUATION OF READING-READINESS TESTS

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ANOTHER report[1] will give the results of an extensive study of more than a hundred tests, examinations, and ratings of reading readiness. That study, confirmed by an extended investigation in the Horace Mann School,[2] showed that the best predictions of reading progress were made by tests of reading attainments. At the time of entering school, children have already acquired a variety of types of information and skill which represent stages in progress toward reading, even if they cannot read a word, and which are directly used in further reading progress. The first study revealed a mass of data concerning the merits and the defects of practically all types of tests heretofore used. The present study was designed to carry forward the analysis and to reveal the battery of tests which will be most useful early in Grade I.

DESCRIPTION OF THE TESTS USED

The following tests, printed on sheets eight and one-half by eleven inches in size, were used in this study.

Test 1. Picture Interpretation and Directions Test.—This test employs two pictures, a farm scene and a town scene. The latter shows a railroad station and various buildings, automobiles, etc., typical of a small-town square. The examiner reads orally a series of statements, dealing with objects and situations in the picture, together with directions to mark the objects with crosses, circles, etc. For each picture a series of such exercises, varying from easy to hard, is provided.

This test is a composite type which measures in various degrees a number of abilities, including the following: (1) ability to attend to

[1] A. I. Gates, G. L. Bond, and D. Russell, *Methods of Determining Reading Readiness* (a monograph to be published in 1939 by Teachers College, Columbia University).

[2] A brief report of results is given in Frank T. Wilson and Agnes Burke, "Reading Readiness in a Progressive School," *Teachers College Record*, XXXVIII (April, 1937), 565–80.

and understand things said by the teacher, (2) ability to keep in mind what has been said, (3) ability to carry out directions of increasing complexity, (4) ability to interpret and to locate items in an illustration, (5) knowledge of words and concepts in each of two different areas—the farm and the village, (6) ability to sustain attention in an activity similar in length to an ordinary schoolroom session. The words and concepts used in the test are drawn from preprimer and primer materials.

Test 2. Word-matching Test.—This test consists of a page of boxes, in each of which appear four words forming a hollow square. Two of the four are identical; the pupil is asked to draw a line between these two.

Familiarity with words used in the test, or similar words, experience in looking correctly at words, knowledge of the direction in which words are to be perceived, and other features of word perception, as well as word knowledge, would reveal themselves in this test. It is a special type of a general form of test found in an earlier study to be among the best for predicting reading ability.

Test 3. Word-Card Recognition Test.—Test 3 is somewhat similar to Test 2, except that psychologically important differences appear. In Test 3 the pupil has in a box on his paper a line of four words. The examiner for five seconds "flashes" a large card bearing one of these four words in print-like characters. As soon as the card is removed from sight, the child looks at his four words and draws a line around the one identical with the word flashed.

This test is designed to reveal ability to see the word in larger size at a distance, as he would in noting words on the bulletin board, etc., and then to remember it and identify it in typical primer form. All the words on the test sheet are taken from the preprimer or primer materials.

Test 4. Rhyming Test.—Test 4 is a test of ability to give rhymes. It is easier than the rhyming tests used in our earlier studies and therefore enables children to score who failed on the more difficult tests. In this test the pupil is given a picture clue to the rhyming word. The pupil has before him a page containing seven rows of four pictures each. The examiner names the simple objects or actions pictured, such as *box, pin, coat, fan,* and then says "thin" asking the pupil to mark the picture the name of which sounds most like "thin."

The test measures the extent to which a pupil has become acquainted with word-sound elements as the result of oral play with words, of rhyming games, and of hearing, saying, and making up jingles, etc.

Test 5. Blending Test.—This test also reveals much about a pupil's ability to sense and to deal with the sounds of words. The examiner gives the word sounds one at a time with a slight pause between them, and the game is to "guess" what the word is. The child marks the picture on a page to indicate the word that he has chosen.

Test 6. Ability To Read the Letters of the Alphabet.—This test was found to be one of the best indicators of ability to learn to read in the Horace Mann School. It was not as useful in the public schools of New York largely because so many pupils obtained zero or near-zero scores near the beginning of the year. Since the test is simple to give, and since it is a good thing to know which children do and which do not know the letters, use was made of this test in this study for the purpose of determining its value in another situation. The test consists simply in showing the twenty-six letters (1) in lower case and (2) in capitals, in mixed order, and asking the pupil to name them.

Test 7. Sounding the Letters.—This test consists in showing the pupil letters of the alphabet one at a time and asking him not to name the letter but to give the sound which the letter makes. It is a test, in other words, to determine whether the pupil has had some experience in playing with sounds or telling the sounds which different letters stand for. This test was very useful in Horace Mann School, in which the pupils, for the most part, have had a great deal of experience in working with letter picture-books and in play with words and word sounds, and the like, but it was too difficult for most pupils in the New York City schools previously studied. The test was repeated to yield further data concerning its value.

THE SCHOOLS AND THE TESTING PROGRAM

These tests were given in the third and fourth weeks of school to all the pupils entering Grade I in a small city in Connecticut. The people and the school of this city are believed to be typical of American communities. The school children show a typical distribution of intelligence, and the city has a typical variety of social-economic sections. Classes in nine different schools were studied.

The tests were administered and scored by two experienced examiners, Dr. Eva Bond and Mr. Elden Bond.

Reading progress was measured at the end of the term by administering four tests: (1) Gates Primary Reading Test, Type 1, Word Recognition; (2) Gates Primary Reading Test, Type 2, Sentence Reading; (3) a test similar in character to the Gates test, Type 1, but composed entirely of words found in the reading books used by all classes during the term; and (4) a test of reading sentences restricted to the words studied by the pupils. From these tests three scores were obtained: (*a*) total reading score—the total raw scores of four tests; (*b*) total sentence-reading score—the total of Tests 2 and 4; and (*c*) total word recognition—the total of Tests 1 and 3.

In the city in which the study was made, teachers were free to adopt, with only a few general restrictions, the type of teaching program that they preferred. Since the procedures differed appreciably among the classes used in the study, it was possible to determine, more exactly than in the previous study, the influence of the method of teaching on the predictive value of the several tests.

In the preceding study it was found that correlations between tests given soon after the pupils entered school and achievement measured at the end of the second term were appreciably higher than those between the same tests and attainments at the end of the first term. This difference is doubtless due to the fact that the measures of reading ability are more reliable at the later time; the pupils' reading ability is more stable and represents a greater range of ability. It would be expected, therefore, that the correlations presented in this report would have been higher had the reading attainments been measured at the end of the year instead of at the midyear.

Table 1 gives certain data concerning the distribution of test scores which should be taken into account in studying the correlations.

As a result of preliminary testing, the first five tests as revised for the present study showed very satisfactory distributions. In each case the scores were distributed throughout the range, excepting only the two extremes. In the letter-naming and the letter-sounding

tests there were many zero scores, as in the earlier study with New York City pupils. These tests were retained for further investigation of their value for diagnostic purposes.

TABLE 1

SCORES OF FIRST-GRADE PUPILS ON SEVEN TESTS OF READING READINESS

Test	Total Possible Score	Mean Score	Standard Deviation of Distribution	Percentage of Zero Scores	Percentage of Perfect Scores
1. Picture interpretation	45	30.9	8.35	0	1
2. Word-matching	18	10.9	3.86	0	1
3. Word-card recognition	20	9.7	5.20	0	0
4. Rhyming	7	4.0	1.76	0	0
5. Blending	7	4.1	1.75	0	0
6. Reading letters:					
a) Lower-case letters	26	2.3	8.70	42	2
b) Capital letters	26	4.1	7.50	31	2
7. Sounding letters	26	0.8	4.20	59	0

INTERCORRELATIONS OF TESTS

The intercorrelations of five tests are given in Table 2. Reading and sounding the letters are not included because of the large number of zero scores in the population studied.

TABLE 2

COEFFICIENTS OF RELIABILITY (SECURED BY SPLIT-HALVES TECHNIQUE) AND INTERCORRELATIONS OF FIVE READING-READINESS TESTS ADMINISTERED TO 182 PUPILS

Test	Coefficient of Reliability	Intercorrelation with Test				
		1	2	3	4	5
1. Picture interpretation	.86	.....	.36	.44	.34	.38
2. Word-matching	.86	.36	.....	.63	.48	.32
3. Word-card recognition	.88	.44	.63	.....	.49	.29
4. Rhyming	.84	.34	.48	.49	.....	.42
5. Blending	.81	.38	.32	.29	.42	.....

The reliability coefficients are very satisfactory. They could be made higher by increasing the length of the test, but such a change would be undesirable. The fact that the intercorrelations, with few

exceptions, are low means that the tests are not duplicating one another greatly but are measuring fairly distinctive abilities.

The highest intercorrelations are those between word-matching and word-card recognition, .63. Since the reliability coefficients of these two tests are .86 and .88, respectively, it is apparent that these two abilities are distinctive to a large degree. Neither of these tests correlates with any other as high as .50. In fact, this intercorrelation is the only correlation in the table as high as .50. The correlations for the picture-interpretation test range from .34 to .44; for the rhyming test, from .34 to .49; and for the blending test, from .29 to .42. The rhyming test correlates higher with the word-recognition test than with the blending. The only obvious reason for this superiority is that play and games involving rhyming of words tend to go with the other activities concerned with letters, words, and stories which are part of the pupils' preschool life.

CORRELATIONS OF THE TESTS WITH READING ATTAINMENTS

Table 3 shows the correlations of the readiness tests and the total reading score (on four tests) and other data in the case of seven classes which gave a sufficient number of complete records to be useful. The classes are grouped into five categories according to the type of program used. All classes were provided with the same basal readers and workbooks and with a fairly large amount of supplementary books and other materials.

Group I.—Group I consists of two classes following a fairly systematic procedure in which, after some preliminary work of an informal character, a program based on the preprimer and primer, with correlated activities including definite instruction in the analysis of word-form and word-sound characteristics, was introduced. These were the two largest classes of the seven. The mean scores on the reading-readiness tests give an average rank position (5) which is below the median of the seven classes. The mean reading score of Class B is the highest of all despite the fact that the reading-readiness score ranks in fourth place. Class A is one place higher in achievement than in initial reading readiness.

The correlations of total reading readiness and reading attainment at midyear are high, .70 and .72. They would doubtless be

TABLE 3

COMPARISON OF READING READINESS AND READING ACHIEVEMENT AT MIDYEAR OF SEVEN CLASSES CLASSIFIED INTO FIVE GROUPS ACCORDING TO TYPE OF READING PROGRAM USED

	Group I*		Group II†		Group III‡	Group IV§	Group V‖
	Class A	Class B	Class C	Class D	Class E	Class F	Class G
Size of class:							
Number of pupils	32	37	23	12	18	14	20
Rank	2	1	3	7	5	6	4
Reading-readiness score:							
Mean	60.3	64.2	67.2	66.2	46.8	62.1¶	76.0
Rank	6	4	2	3	7	5	1
Reading-achievement score:							
Mean	23.4	29.8	24.8	28.1	17.5	17.6	27.8
Rank	5	1	4	2	7	6	3
Correlation between reading score and:							
Total reading-readiness score	.70	.72	.56	.61**	.71	.77††	.22
Picture interpretation	.44	.46	.46	.52	.71	.51	.27
Word-matching	.67	.70	.62	.68	.57	.....	.27
Word-card recognition	.65	.44	.46	.58	.66	.78	.30
Rhyming	.67	.58	.09	.22	.03	.41	−.07
Blending	.30	.54	.10	.18	.19	.22	.16
Reading letters	.63	.55	.22	.....	.39	.....	.38
Sounding letters	.48	.38	.18	.....	.27	.....	.22
Mental age	.45	.....	.40	.....	.....	.....	.....
Correlation between reading readiness and teachers' estimate of reading achievement	.51	.59	.52	.67	.75	.....	.24

* The classes in Group I used preprimers and primer and word analysis, including study of word sounds (phonetics).

† The classes in Group II used preprimers and primer but little or no word analysis or phonetics. Emphasis was placed on recognition of word configuration.

‡ Group III made large use of experience material, charts, announcements, and miscellaneous materials. Less systematic use was made of basal books, and there was little or no word analysis or phonetics.

§ Group IV used methods and materials similar to those described for Group III and also employed a moderate amount of word analysis or phonetics.

‖ Group V began with charts, experience stories, and casual work with many books, then changed to more systematic use of textbooks.

¶ Estimated on basis of the tests given.

** Does not include the scores on the letter-reading tests.

†† Does not include the scores on the tests of word-matching and reading letters.

higher had reading achievement been measured at the end of the year. The correlations of total readiness and the teachers' judgments of reading ability at the midyear are lower, .51 and .59, but still substantial.

Of the separate reading-readiness tests, the word-matching test gives the highest correlations with reading. The next is the rhyming test, followed by naming the letters and the word-card recognition. The picture-interpretation, the blending, and the letter-sounding tests are about the same. All the single tests appear to measure abilities that enter substantially into the processes of learning to read.

Group II.—This group consists of two smaller classes which were taught in much the same manner as those in Group I except that there was little or no word analysis or phonetic work. In these classes a type of "look and say" procedure was followed. Words were learned as total configurations, and, although total word forms were compared, little was done to teach the pupils to recognize individual letters or letter or phonogram sounds, or to employ such elements in working out the recognition and the pronunciation of words. Work of this sort was to be introduced later.

The mean reading score of these two classes at midyear is almost identical with that of the two in Group I (26.45 and 26.60, respectively). The classes in Group II have a slightly higher average reading-readiness score, however (66.70 compared with 62.25). The total readiness scores in the classes in Group II give somewhat lower correlations with reading attainments. A survey of the correlations of the individual tests shows that word-matching gives the highest correlation and that word-card recognition and picture-interpretation tests are next. The most significant fact is that in this group the rhyming and the blending tests and the letter-reading and the letter-sounding tests give much lower predictions than they did in Group I. These differences can scarcely be accounted for in any way other than on the assumption that they are due to the differences in instruction. When word-form and word-sound analyses are introduced and pupils are encouraged to identify and to sound letters and groups of letters in working out the recognition and the pronunciation of words, the reading attainments show fairly high correlations with tests of rhyming, blending, naming letters, and giving word sounds.

When such word-analysis activities are not used or are used to a less extent, the correlations with these tests are lower.

It should be noted that in Group II the test of matching total word forms gives the highest correlation; indeed, this coefficient is higher than that for the total readiness score. Since picture interpretation and word-card recognition give high correlations, it is obvious that the prediction is reduced by including in the total the scores from the rhyming, the blending, and the letter tests. Word-analysis activities were, however, to be introduced later in these classes, and it is probable, therefore, that reading progress thereafter would be correlated with ability in these tests.

Groups III and IV.—These two classes offer the same major contrast as Groups I and II, but the differences appear on a different type of basal instruction. Groups III and IV consist of two classes making much less systematic use of the basal textbook and much more use of experience material, improvised charts, announcements, etc. The class in Group III has the lowest reading-readiness score in the list of seven, and its midyear reading attainment is also the lowest. The class in Group IV is next to the smallest, has third from the lowest reading-readiness score, and has next to the lowest reading ability at midyear. In both classes the correlations of total reading readiness and midyear reading ability are high, .71 and .77. The correlation of reading readiness and the teacher's judgment of reading ability in the Group III class is also high, .75.

In the Group III class, employing little or no word analysis or phonetics, the correlations of the rhyming, the blending, and the letter-sounding tests are low. The best predictions are made by picture interpretation, word-card recognition, and word-matching. That the first two of these should give relatively high correlations is suggested by the extensive use of pictures, posters, charts, and blackboard work used in this class. In Group IV, in which these materials were used extensively, the word-card and the picture tests also give the highest correlations. In this class, which also used some phonetics and word analysis, the rhyming test gives a higher correlation than in the class in Group III, but the blending test does not give a reliably higher figure.

Group V.—Class G cannot be easily grouped with any of the pre-

ceding classes. It began with informal work and later shifted to more systematic use of textbooks. It is difficult to classify on the basis of word study, which was inconsistent. The class management was rated as rather poor, and the pupils seemed more tense than in other groups. This class has the highest average reading-readiness score of the seven; it is, in fact, approximately 15 per cent higher than the next lower score. Midterm achievement on the reading tests is third in the list. In this class the reading-readiness tests give far lower correlations than in any other, both with the scores on reading tests and with the teacher's judgment. The highest correlation is given by the test of letters; word-card recognition, word-matching, and picture interpretation are next and about the same; the blending is low; and the rhyming is slightly negative. Since both examiners rated this teacher as the least capable in the group, the interpretation is similar to that presented in the preceding report,[1] namely, that the more effectively instruction is adjusted to individual differences, the higher the correlation between a predictive measure and later achievement. The better the teaching, in other words, the more useful and valid are the reading-readiness tests for guidance and prediction.

Other findings.—Before a discussion is given of the main results, two other findings should be presented. The first is that the correlations of the readiness tests with the midyear reading tests are similar to those with the teachers' judgments; the former are higher in three cases and the latter in three. The second is that mental age, in the two classes in which it is available, provides a comparatively poor prediction of reading progress. In this investigation, as in the earlier study, it appears that mental age predicts reading progress less well than several individual subtests in a good reading-readiness battery. Since mental age does not correlate highly with these subtests (the coefficients in Classes A and C vary from .18 to .60), it may well be employed as a subtest, with a weight similar to that assigned to the median subtest in such a battery as that used in this study.

CONCLUSIONS

Several conclusions are suggested by the results: (1) The tests which measure reading progress two or three weeks after entering

[1] A. I. Gates, G. L. Bond, and D. Russell, *op. cit.*

school give, on the whole, satisfactory predictions of reading ability at midyear. (2) The predictive value of a particular test varies with the teaching method. In general, the highest correlations are given by tests which measure the abilities which pupils are led to emphasize in their learning. (3) The better a teacher adjusts her work to a pupil's special abilities, as revealed by the readiness tests, the better the prediction made by the tests.

These hypotheses lead to the assumption that the teacher will profit most from reading-readiness tests if she concerns herself with a pupil's status in each test and arranges her later work to conform to it. This statement is not a denial of the value of a "total score." It is an assertion, however, that, when only the total score is considered, much, if not most, of the information of value for the *guidance* of the pupil is lost and the predictive value is often lowered. For example, if a teacher is planning to emphasize chiefly whole-word recognition without analysis, it is more important for her to know the pupil's status on word-recognition tests than on "total score," and the former will give a better correlation with reading progress than the latter.

Every consideration, moreover, points to the desirability of knowing and carefully considering each pupil's status on each readiness test and of conducting subsequent instruction, not in any standardized pattern for the class as a whole, but in such various forms as are indicated by individual needs. For example, if a pupil rates very high in word-matching and low in blending, it is important to avoid beginning reading with a strong emphasis on phonetics and analytic work and to place little dependence on word configuration. It would also be unwise in this case either to fail to note, or to do anything about, the weakness in rhyming. To restrict the work to "look and say" would probably result in overemphasis of this type of attack and prolonging of the weakness in rhyming. The ability to sense rhymes is one that children must learn by experience. The more they are retarded on entering school, the greater their need of such experience. It is for such "diagnostic" purposes that the tests of reading and sounding individual letters were retained despite the fact that about half the pupils obtained zero scores. It is of importance to the teacher to know which pupils know their letters and which do not.

In this view, the reading-readiness tests should be used as any good series of diagnostic tests are employed later. Their main purpose is to reveal the pupil's status in each of the important skills involved in the early stage of reading so that achievement may be insured by giving each pupil the kind and the amount of help which he needs.

The types of abilities tested in this study were those found in the earlier investigation to be most promising for this purpose as well as for mere prediction. It should be noted that all these abilities, except mental age, may be readily improved by instruction. Since any intelligent teacher can tell from reading the test what these abilities are and since a variety of methods for improving them are widely known, the pupil's status on these tests suggests at once the most valuable forms of instruction to include both in the "reading-readiness" and the full-fledged reading program.

THE TEACHING OF LINEAR MEASURE, SQUARE MEASURE, AND TIME[1]

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THE Committee of Seven in 1938 completed a five-year piece of research on three out of four studies of the grade placement of mensuration: linear measure, square measure, and time measure. Volume measure is still under investigation.

These studies of mensuration have been the most thorough and significant of any of the studies made by the Committee of Seven to date. More time has gone into the preparation of teaching outlines and tests; more preliminary experiments have been done; and the results have been more carefully analyzed into their various parts than in any of the preceding studies. The experience of the committee during the preceding decade and more has been capitalized in these experiments of the past five years. A total of 8,355 children in forty cities and towns scattered through seven states have been used in these experiments.

A study of the teaching outlines and tests for linear measure, square measure, and time measure[2] is necessary for an adequate con-

[1] This article presents the results of Committee of Seven Experiments and Recommendations for Curricular Placement. The Committee of Seven of the Northern Illinois Conference on Supervision during the course of these experiments has consisted of the following persons: Orville T. Bright, superintendent of schools, Flossmoor; Turner C. Chandler, principal of the Burnside School, Chicago; Harry O. Gillet, principal of the University Elementary School, University of Chicago; J. R. Harper, superintendent of schools, Wilmette; Raymond Osborne, principal of the Francis W. Parker School, Chicago (temporarily *in absentia*); O. E. Peterson, head of the Department of Education, Northern Illinois State Teachers College, De Kalb (secretary); Howard C. Storm, superintendent of schools, Batavia; Carleton Washburne, superintendent of schools, Winnetka (chairman); William H. Voas, psychologist in the public schools at Winnetka (associate); and Mabel Vogel Morphett, director of research in the public schools at Winnetka (director of research for the committee).

[2] Obtainable from the Winnetka Educational Press, Winnetka, Illinois, for eighty-five cents each.

cept of what is meant by placement at the various levels. In general, it will be found that these teaching outlines recommend a great many personal experiences by children in manipulating actual objects and doing actual measurement. In this account we have suggested merely the outcome that may be expected from such experiences. A more abstract form of teaching might well make the placement higher than is indicated. Such teaching would, however, be difficult to justify in terms of modern pedagogy and the basic understanding that it is desired to give children through work in measurement.

The procedures used in these experiments correspond, in general, with the procedures that have been used by the Committee of Seven during the past ten or fifteen years and may be summarized briefly as follows:

On the basis of committee judgment, preliminary grade placements were estimated for each topic. In the schools of the committee members each topic was taught in the estimated grade and in the grade above and the grade below. On the basis of the results obtained from these preliminary experiments, the materials and the placement were revised.

The co-operation of hundreds of classes in a wide variety of communities scattered through the Middle West was next secured. Each topic was taught to the children in the grade tentatively established by the preliminary experiments and in the grade above and the grade below. All these children were given intelligence tests and foundations tests in number processes and concepts and, for the more advanced sections, in the apparently prerequisite concepts and processes in the fields being studied. After these foundations tests the teacher was given a week to train the children in any of these supposedly prerequisite concepts and skills in which they showed weaknesses. Then another parallel form of the foundations test was given. Only data from the second form were used in the final tabulations.

Children were then given a pretest covering completely the topic about to be taught, for the purpose of finding out how much knowledge children already had of that topic—knowledge which they had acquired either through incidental learning from general experience or from previous teaching.

During the experimental period teachers taught the unit in accordance with the detailed teaching outline which was prepared by the Committee of Seven, the teaching time being strictly controlled and, therefore, presumably uniform for all schools. The exact teaching time for each group of topics is indicated in the teaching instructions. In general, it ranged for each group (as taught in the experiments, not as re-grouped in the following recommendations) from six days to four weeks, the teaching periods being twenty to thirty minutes a day. The teaching outlines were sufficiently definite and detailed to assure reasonably uniform procedures. Strictly speaking, therefore, the results are always in terms of the specific method, the specific amount of time, and the specific tests planned by the committee. It is always possible that further experimental work may show that, were a topic taught for a different length of time or by a different method or were it tested by a different type of test, the placement would be altered.

After the teaching period, a period of six weeks was allowed to elapse with no teaching or review of the topics. Then, for determining how much of what was taught was retained well beyond the teaching period, a retention test was given, parallel, problem by problem, with the pretest—in reality, merely another form of the pretest.

The results were plotted against mental ages in six-month intervals and against the foundations-test scores. In most cases, however, foundations-test scores were found to be so high as to be insignificant for determining placement; that is, well before the children had reached the mental age at which they made satisfactory scores on the retention test, their scores on the foundations test were, in a large majority of cases, so high as to indicate a satisfactory background of the prerequisite knowledge and skills. Therefore foundations tests have been ignored in the tabulations and graphs.

For each problem or group of problems in each topic a graph was prepared like Figures 1 and 2. All curves shown have been smoothed on the graphs.

The dashed line at the bottom of each graph indicates the per-

centage of high pretest scores at each mental level,[1] or the children's ability to handle the subject before the experimental teaching began.

The middle solid line indicates the percentage of high scores on the retention test made by children at each mental level whose scores on the pretest indicated an inadequate knowledge of the topic before experimental work began. This solid line is the line most com-

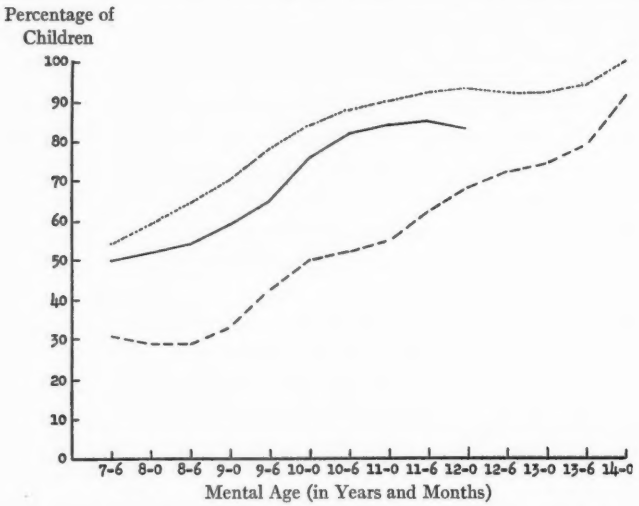

FIG. 1.—Percentage of pupils at each mental-age level making satisfactory pretest scores and satisfactory retention-test scores in measuring lines to the half-inch and the quarter-inch.

monly used in determining the level at which an item can be satisfactorily taught. The point at which it crosses the 75 per cent standard is usually considered to be the level for efficient teaching.

The dotted line indicates the percentage of high retention-test scores of all children whether or not they had made low pretest scores. If it were certain that high pretest scores were the result of

[1] Scores were considered high when three out of four similar problems were correct or, if only one problem was given, when that problem was correct. Scores were considered low or unsatisfactory when none to two out of four problems were right or, in case of a single problem, when that one was wrong. These criteria were used for foundations-test scores, pretest scores, and retention-test scores.

incidental learning and everyday experience rather than possible previous instruction in school, this line would be the logical curve to follow in determining placement. Since, however, we have no way of knowing how much time in some previous grade may have been given to instruction in the topic, this line for the totality of the children is a little hazardous; it does not represent the complete control which the committee has sought to achieve and which is indicated by

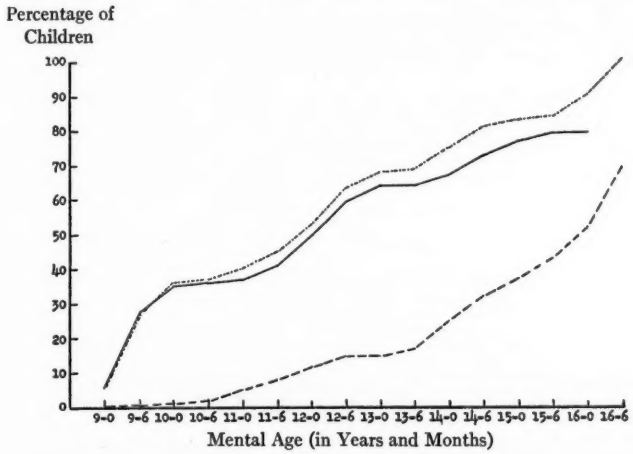

FIG. 2.—Percentage of pupils at each mental-age level making satisfactory pretest scores and satisfactory retention-test scores in subtraction of feet and inches involving borrowing.

the solid line. However, in making practical recommendations, the committee has taken cognizance of this line for the totality, as well as the solid line for children who had low pretests, especially when the percentage of children making low pretests was relatively small (less than 30 or 35).

Fifty-one such graphs were made for linear measure, forty-seven for square measure, and forty-one for time. The recommendations that follow are based on these graphs.

For several topics comparisons were made of the scores of children of the same mental age of various intelligence quotients. In each case intelligence quotient appeared to be unrelated to achievement

except as it is a factor in mental age. Over-age children with intelligence quotients of 80 and mental ages of 10 made practically the same scores as under-age children with intelligence quotients of 120 and mental ages of 10. Intelligence quotient as such has, therefore, been ignored.

In general, the committee has adhered to its traditional standard that an item should ordinarily be taught only to children at a mental level where at least three-fourths of them are fairly sure of success after a reasonable length of time of teaching. This standard is admittedly arbitrary. Any school system content to have a smaller percentage of children master a topic, or perhaps even a school that is willing to give an additional amount of time to the teaching, may conceivably lower the level by six months or a year, the amount of time by which it is lowered depending on what results are acceptable or how much more teaching time can be given.

It has seemed to the committee that the results of the present experimentation would be more useful if the topics were presented in groups by mental-age levels, rather than in separate items unrelated to necessary teaching constellations. In the arrangement of the materials in this way, some liberty has been taken with strict statistical interpretation of the graphs. If, for example, a single item, closely related to other items, appears slightly more difficult or slightly easier than most of the constellation in which, for practical purposes, it appears to belong, it has been put with those to which it obviously relates, rather than isolated at a level higher or lower. The committee has prepared, however, a mimeographed booklet giving each test item in summarized form and a brief analysis of the graphs for each item.[1]

The recommended curriculum, then, for measurement, in terms of mental-age levels, is as follows:

MENTAL AGE 7 TO 8

Linear measure.—Simple comparisons of length are readily learned at this level (indeed, some are well known before teaching begins), such as ability to recognize which bench is four times as long or

[1] This booklet may be purchased from the Research Department of the Winnetka Public Schools, Winnetka, Illinois, for fifteen cents.

which post is four times as high as a given one. Comparison of the thickness of books, however, when books are drawn side by side, calls for definite teaching but then is readily learned. The unit includes two, three, and four times as high, wide, long, thick, deep, etc.

Children readily learn to measure lines in even inches, although they find it somewhat more difficult to draw lines an even number of inches long. They can tell how many inches there are in a foot and in two feet, although recognition that twenty-four inches is two feet is somewhat harder than recognizing that two feet is twenty-four inches.

Square measure.—No square measure is indicated for this level.

Time.—Children can readily learn to read clocks to the even hour and to distinguish between morning and afternoon and the abbreviations "A.M." and "P.M."

MENTAL AGE 8 TO 9

Linear measure.—No linear measure is indicated at this level.

Square measure.—Children already recognize pretty well, and can easily learn to recognize very satisfactorily, areas that are two, three, or four times as large as a given area when either the height or the base is held constant. The way in which the pictures are drawn, however, makes a material difference. If four figures are placed in a row with base constant and with heights varying, like a flight of steps, it is easier for children to recognize that one picture is twice as large as the first, another one three times as large, etc. If, however, figures are placed in a row with the height constant and the base varying, the problem becomes definitely harder. Children can also recognize which rectangular area is half as large as a given area when the base or the altitude is held constant. With teaching, they learn to use a square inch of cardboard as a measuring device for answering such a question as, "Is this picture three times, four times, or six times as large as the square inch of cardboard?"

Time.—Children can learn to distinguish standardized units of time, such as minutes, hours, and days, from unstandardized units, such as length of time taken to walk a block. They can learn to read clocks to the half-hour and the quarter-hour and to read the calendar. They can learn to count elapsed days within the same month on

the calendar, and they readily learn a simple table of time, consisting of minutes, hours, days, and weeks.

MENTAL AGE 9 TO 10

Linear measure.—The relation of inches, feet, and yards can easily be taught in its simpler forms. The number of inches in one or two feet, it will be remembered, went into the 7–8 year level; the number of inches in three feet could have come into the 8–9 year level but would have been isolated there, while for teaching purposes it fits in well with the number of feet in a yard, the number of feet in two yards, the number of yards in six feet, the number of inches in a yard, etc., all of which cluster around the mental ages of nine years and nine years, six months.

Comparisons of length, depth, height, width, etc., involving one-half, one-third, and one-fourth, probably belong here. We say this in spite of the fact that comparisons involving one-half, such as the ability to select from four poles one that is one-half as high as a specified pole, could be taught a year earlier, and comparisons involving one-third, one-fourth, and one-eighth belong, according to the graphs, at the 10–11 year level. Similar comparisons, however, in square measure place them definitely at the mental age 9–10, and certain differences in the distribution of the children and the form of statement of the problem probably account sufficiently for the apparent discrepancies. For practical purposes it seems, therefore, that this unit of linear measure can be taught effectively at approximately the same time as the corresponding unit in square measure.

Square measure.—Children at this age have little difficulty in learning to tell whether a given rectangle is one-half, one-third, one-fourth, or one-eighth as large as a specified rectangle when either height or base is held constant.

Children can begin to determine the areas of rectangles by dividing them up into square inches with a ruler. The high pretest scores indicate that little teaching is necessary to give this ability at this age.

Recognition of a square foot drawn on a blackboard, as distinguished from squares 6 by 6 inches, 18 by 18 inches, 24 by 24 inches, etc., is already possible for a fairly large proportion of nine-

year-olds before definite teaching and is as easily learned at this level as at any subsequent one. At this level, too, children learn to find how many square inches there are in a square foot by drawing a square foot and ruling it off into square inches.

Time.—No time measure is indicated at this level.

MENTAL AGE 10 TO 11

Linear measure.—Children can now learn effectively to measure in feet and inches and to measure and draw lines accurately to the quarter of an inch. They can estimate the length of their classroom roughly in terms of a multiple-choice question ("Which of these numbers tells about how long your classroom is: 30 feet, 50 feet, 75 feet?"), but this ability shows little relation to mental age. Children at nine are fully as successful as children at twelve, and, while there is some improvement at a mental age of thirteen, there is little thereafter. The whole graph is exceedingly irregular.

Much the same can be said about recognizing which units of measure are used to express the distance between cities, the length of a piece of cloth, the height of a building, the length of a farm. There is high success with this work, after teaching, at every mental-age level from ten up, and the few children included in the experiment with mental ages as low as nine did almost as well as those at mental levels of ten and higher.

When dimensions are given in terms of whole feet, the perimeter of a garden belongs definitely at this age level. The rise of the curve is steep to this point, and thereafter there is little improvement. Pretest scores are low all the way up to a mental age of fifteen; this topic has to be systematically taught.

Strangely enough, such a problem as the following seems to require relatively little teaching: "Jack wants his table top to be 3 ft. 4 in. long. He has some boards 5 ft. 6 in. long. How much should he saw off the boards to have the table the right length?" By a mental age of ten years and six months pretest scores are only a little lower than retention-test scores, and throughout the graph pretest and retention-test scores run surprisingly close. Reasonable success is achieved by a mental age of ten years and six months, but there is still marked improvement to a mental age of eleven years and six

months, after which the curve flattens out almost completely. Other problems involving the different forms of subtraction (comparison and addition) but involving no more technical difficulty belong at this same level, but for some unknown reason they show much more need for systematic teaching. The following problem, in particular, shows a wide gap between pretest and retention-test scores: "Bert has a piece of lumber 8 ft. 9 in. long. If he uses 6 ft. 4 in. for making a bench, how much will he have left?"

The following problem: "The table Ralph is making needs four legs, each one 2 ft. 1 in. long. How long a piece of lumber must he have to make all four legs?" belongs definitely at the mental level of ten to eleven years. Improvement thereafter is very gradual. Pretest scores are rather low.

Square measure.—No square measure is indicated at this level.

Time.—Children can now complete the table of time (seconds in one minute, minutes in one hour, hours in one day, days in one week, weeks in one month, months in one year, days in one month, days in one year, days in one leap year, and weeks in one year). They can learn to read clocks accurately to the minute and to express time accurately to the minute in the form, 10:22 P.M.

The recognition of the difference between arbitrary and natural time units, such as hours and minutes versus days and years, is satisfactorily completed at this level. Just as they can solve problems involving simple manipulation with linear measure, so they can calculate the amount of time elapsed in even quarter-hours, from 10:15 to 11:00 for example, when the total time is within the same hour. They can find the number of minutes required to walk one block if, say, thirty minutes are needed to walk fifteen blocks, or they can find the number of days needed to make one poster if seventy-two days are needed to make nine posters.

MENTAL AGE 11 TO 12

Linear measure.—No linear measure is indicated for this level.

Square measure.—This mental age seems to be the level at which square measure as a regular topic can best be introduced in its simpler forms. For the first time children can recognize that an area is a certain number of times larger than another area when both

height and base differ; for example, they can take a sheet of paper half the height and half the width of another and, using it as a unit, determine that the larger paper is four times as large as the smaller sheet. They can recognize a square inch drawn on the blackboard, as distinct from a half-inch square or a two-inch square, although this recognition is not clearly a function of mental age, since the graph is nearly flat. They can calculate the number of square inches in a given area when the dimensions are given. They can learn easily how many square inches there are in a square foot. They are able to see how many pieces of paper one foot square will go into a marked-off rectangle on the blackboard and also, of course, how many square-foot pieces of paper would be needed to cover a square yard on the blackboard. They can easily memorize the number of square feet in a square yard and can learn to calculate the number of square feet in an area when the dimensions are given in even feet.

Time.—No time measure is indicated for this level.

MENTAL AGE 12 TO 13

Linear measure.—Three distinct, new elements of linear measure can be successfully taught at this level although all of them give better results if postponed to the following year: drawing and measuring lines to the eighth of an inch ($2\frac{7}{8}$ inches, etc.),[1] calculating the number of inches in a fraction of a yard ($\frac{1}{2}$, $\frac{2}{3}$, etc.), and measuring distances on maps with a scale of miles.

Square measure.—Not until this level are children successful in learning to recognize squares and oblongs, as distinct from triangles, trapezoids, etc., as rectangles. It is hard to believe, however, that, with longer teaching and practice on this element, such recognition could not be taught earlier, but there is probably little object in doing so. Children can recognize relative sizes of rectangles (marked off in squares), that a large rectangle is, for example, six times as large as a small one, or a small rectangle one-sixth as large as a large one, when base and altitude of the larger rectangles differ from those dimensions of the smaller one. They can also, with some difficulty,

[1] Measuring is not particularly satisfactory at any level for those with low pretest scores, but pretest scores reach 73 per cent at the mental age of thirteen years and six months, 77 per cent at the mental age of fourteen years and six months.

learn how many small cards can be cut from a larger card, when they are in readily divisible units, like the number of 3 by 5 cards that can be cut from a sheet 9 by 10, but this unit is much more readily learned at the next level higher.

Time.—Children can solve simple problems in the multiplication of hours and minutes, even involving the change of a product like seven hours and seventy minutes to eight hours and ten minutes. This particular element could be taught a little earlier were it not for the fact that at the preceding level there are no other aspects of time measure indicated. It is at the twelve-year level that children can count elapsed weeks on a calendar from one month into the next and the elapsed days from one month into the next, and the elapsed hours and minutes of more than an hour, such as 8:45 to 10:30, or 8:45 in the morning to 4:15 in the afternoon.

MENTAL AGE 13 TO 14

Linear measure.—Children can divide feet and inches by a whole number when both the feet and the inches are evenly divisible, and can divide yards by inches, making the necessary change of denomination, when the problem is easy, such as the following: "Barbara is putting blue paper on her cupboard shelves. She has 3 yards of blue paper. The shelves are 27 inches long. How many shelves will this cover?"

Square measure.—Children of this mental age can learn to draw rectangles of a given number of square inches with varying bases when the problem is very easy, such as drawing a four-square-inch rectangle two inches wide. They can even do this particular problem at the level below; but, if the problem involves a fraction, such as a base one-half inch wide, it is better at the next level higher.

While there is some doubt as to the children's realistic concept of the size of an acre or of a square mile (see the next level), they can compute the area of a tract of land in square miles, when the dimensions are given in miles, at a level below mental age 13–14. They can remember satisfactorily the number of acres in a square mile and calculate from a diagram the acres in a half-section. Smaller fractions of a section, however, belong in the next level higher.

Time.—No time measure is indicated for this level.

MENTAL AGE 14 AND HIGHER

Introduction.—It is not until children have reached a mental age of approximately fourteen, and sometimes not until even later, that the manipulation of denominate numbers, involving the more complicated forms of applying the four fundamental processes and involving changes in denomination, can be effectively taught and retained. A thorough understanding of the measures to be used and insight into the simpler manipulation of the measures, indicated in the preceding recommendations, lay a foundation upon which the later skills can be built without wasteful and confusing loss of time and effort.

Linear measure.—All practical forms of applying the fundamental operations to linear measure can be taught at mental ages approximating fourteen. Simpler forms, such as addition of feet and inches involving reduction of the answers, can go a trifle lower; more difficult forms, such as dividing ten feet one inch by two feet seven inches, must either go higher or receive more intensive teaching than was done in the experiment.

It is interesting that, although the addition of feet and inches involving reduction of the answers can be learned at the mental age of thirteen years and six months, the level of effective learning goes up to fifteen when the problem is complicated by involving the perimeter of a rectangle.

Subtraction of feet and inches involving borrowing shows a similar curve except that, after the mental age of fourteen years and six months, it flattens out materially. Multiplication of feet and inches involving carrying reaches satisfactory achievement also at about the mental age of fourteen years and six months but continues to improve thereafter.

In the division of feet and inches a marked contrast is shown between problems that "come out even" and problems that require more arithmetical manipulation. Such a problem as the following is relatively easy: "Paul has several pieces of lumber 3 ft. 2 in. long. He wants to fill in a gap in the sidewalk 12 ft. 8 in. long. How many pieces of his lumber will he need to fill in the gap?" Pretest scores are almost as good as retention-test scores for such a problem, the

children's common sense and visualization being, in many cases, sufficient to solve it before formal teaching. With teaching, there is very high success by a mental age of fourteen years and six months and reasonable success as low as thirteen.

When, however, the problem is made more difficult so that children have to find, for example, how long each piece will be if a plank thirteen feet four inches long is sawed into four equal pieces, the children do not make a satisfactory showing until a mental age of about sixteen. The type of division involved makes no difference, that is, finding the size of a given part of a whole, finding how many parts of a given size are contained in a whole, or finding by what number a part must be multiplied in order to give a whole.

The table of linear measure can, of course, be completed at this time by including the number of feet in a mile.

Square measure.—Finding the number of acres in usual fractions of a section (one-half, one-fourth, one-eighth, and one-sixteenth) can be readily calculated from a diagram. The familiar schoolroom problems of finding the number of square yards of linoleum needed to cover a floor the dimensions of which are given in feet is decidedly difficult for children below fourteen, but, at a mental age of fourteen years and six months, scores are satisfactory.

Whether the teaching was inadequate or whether there was something more inherently difficult than appears at first sight, the experimental results showed children's ability to estimate the number of acres in their school grounds not to be satisfactory until a mental age of fifteen years and six months. A problem asking them to diagram a square mile of land in their neighborhood by indicating street or road names was not satisfactorily achieved by children until a mental age of seventeen. Yet children's ability to manipulate acres and square miles, in spite of their seemingly vague concept of the areas involved, comes earlier. Question may well be raised how much good it does pupils to manipulate such measurements when they have little idea of the meaning.

Time.—The children are able to solve problems involving adding and multiplying hours and minutes, and dividing, etc., with these time units, at mental levels ranging between twelve years and sixteen years six months, according to the difficulty of the problem. In gen-

eral, however, the manipulation of time units beyond the things indicated for the lower levels clearly belongs at mental ages of fourteen and up.

SUMMARY

In summary, it will be seen that the simplest quantitative relationships in linear measure, square measure, and time are readily understood by children of mental levels as low as seven and eight; that more accurate detailed relationships and very simple manipulations can be effectively taught at mental levels from nine to twelve; whereas real accuracy in measurement, any complex relationships, and any manipulation involving the changing of units or the use of such relatively uncommon units as acres and square miles and scales of miles belong at mental levels usually associated with the junior high school, and particularly with the upper part of the junior high school.

Mensuration is not a single topic, but a great variety of different skills and concepts belonging at a variety of different levels. Most of the elements show positive relationship to mental age, while few of them show any important relationship to the ordinary processes of arithmetic; that is, the seemingly prerequisite number processes are usually well enough known by the time a child reaches a level for a given unit of mensuration, so that no consideration has to be given to this skill.

It should be added, in passing, that pretest scores show gradual improvement in most topics from the low levels to the higher levels, usually tending to parallel roughly the retention scores, except that they rise less steeply. The gap between pretest scores and retention-test scores is, in most cases, very wide and shows a pronounced effect from direct teaching. In only a few cases do pretest scores indicate that the majority of children, without direct teaching, will pick up a satisfactory knowledge of mensuration. In the great majority of cases satisfactory learning and retention are achieved in a remarkably short time of concrete teaching when children have reached a suitable mental level.

THE PLACE OF HOME STUDY IN RURAL EDUCATION

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EDUCATIONAL leaders generally see only two possibilities for the rural child: the one-room school or the consolidated school. The First International Conference on Correspondence Education, held at Victoria, British Columbia, on August 22, 23, and 24, 1938, brought strikingly to the attention of the delegates from the United States the fact that Canada, Australia, and New Zealand have for many years been successfully using a third method by which to provide education in rural areas, namely, home study.

No arguments need be advanced for either the one-room school or the consolidated school. There is ample evidence that, given respectable financial support and satisfactory instructional and supervisory service, both can offer a superior type of education. Since home study has, strangely, been overlooked in the United States, in spite of our generally accepted reputation as the most progressive nation in the world in public education, discussion of this technique is justified.

FIELDS OF USEFULNESS FOR HOME STUDY

Home study should be used for those children who must put forth undue effort or must unreasonably expose themselves in going to and from school and for whom transportation provided by the district would be either too costly or too uncertain. It should also serve physically incapacitated boys and girls who cannot or should not leave their homes, even though they may not live far from a school. Home study is essential for them if they are to receive any education at all.

Finally, there are boys and girls attending the many one-room schools which have such small enrolments that per pupil costs are unreasonably high. For the sake of economy pupils in these schools should be educated in their homes. With the decline in rural popula-

tion in many parts of the United States, resulting from the increase in the size of farms and the decrease in the size of families, the one-room school of very small enrolment has become rather common.

There are three types of children, then, to whom the opportunity for home study should be made available: isolated children, physically handicapped children, and children attending one-room schools with such small enrolments that home instruction would be much less expensive. There is no way of estimating the number of boys and girls in the United States who come within these three categories, but it is certain that the number runs into the tens of thousands.

DOES HOME STUDY PROVIDE SATISFACTORY EDUCATION?

A demonstration that it may be less expensive or more convenient for a child or a high-school youth to obtain his schooling at home is not, in itself, convincing evidence of the desirability of such education. The nature of the education must also receive consideration. Home study cannot be criticized on the ground that the pupil's attainment is lower or his progress less satisfactory when the work is carried on at home. Wherever the plan is used, educators have found that the child who learns at home need not fear comparison with the child who goes to school.

The most cogent argument advanced against home study is that it denies the child face-to-face contact, stimulating interaction, and social intercourse with his classmates. There is undeniably a difficulty here, but there seem to be ways of overcoming it. New Zealand has perhaps done most to set up compensating socializing agencies. That dominion provides traveling libraries, magazines and bulletins, clubs—such as the Lone Guides, Lone Scouts, or Pen Friendship Club—savings banks, correspondence school parents' associations, and, finally, one- or two-week schools to which the isolated pupils are brought for intensive training and socializing experiences. Even when all these services are supplied in addition to regular instruction, the cost per pupil is less than in the typical town or city school.

If there are disadvantages to be overcome, there are also great inherent advantages. Individualization with respect to the type of subject matter and assistance given and with respect to the rate at which the school work is covered is naturally and easily provided. The pupil who is sick finds no hiatus when he returns to his work.

Because the teacher is an individual helper, he becomes an ideal whose influence, it seems at times, is the greater for his absence.

Certain other advantages of home study are mentioned in a statement from A. G. Butchers, headmaster of the New Zealand Education Department, Correspondence School.

From the point of view of health also there are compensating advantages in studying at home, particularly for pupils who live miles from a school. In wet weather they have not to make the long journey to and fro in the wind and the rain. Nor have they to sit all day with wet, cold feet, with only a cold packed lunch to sustain them at the midday interval. They are consequently not so liable to catch or to spread colds. They are not exposed to epidemics of infections or contagious sickness. They lose no time traveling to and from school. They are not absent from home, from perhaps 7:30 or 8:00 A.M. until perhaps 5:00 or 6:00 P.M. School, for them, begins at 9:00 and ends at 3:00 or 3:30. They are warm and dry. They have a hot midday meal with the rest of the family. Before and after school they delight in profitably helping their parents on the farm and in the home. Careful investigation has revealed very little, if anything, in the nature of excessive employment of Correspondence-School pupils to the detriment of their health or education. This possibility of economically helping father or mother while continuing their studies by correspondence has simply opened for many the door to continued education, since it was impossible for them to be spared all day to attend school. The practical work is complementary to the sedentary and bookish, and helps to promote balanced growth of mind and body. The physical and moral advantages of a free country life, lived so much out-of-doors with horses and other animals, in a natural and wholesome way, contrast strongly with the disadvantages of living in urban areas, the noise and pollution caused by motors, trains, factories, flats, boarding-houses, picture theaters, and all the rest of the city child's swift-moving and sophisticated life. There is even something to be said for the absence of the teacher, whose continuous presence and voice are apt to overwhelm the classroom pupil. There is not enough quiet in the ordinary school, not enough time for reflection and thought. Things are always moving. The Correspondence-School pupil can put down his pen at times and indulge in daydreams, or get up and have a scamper outside with his dog, and resume his studies the better for the interlude. He is a human individual, not merely a unit of a flock, moving or stopping just as the drovers and dogs direct. These things must be borne in mind when the balance is being struck between the disadvantages and the advantages of correspondence education for children unable to attend school. Nor should the wider social implications and values of the correspondence methods as described be overlooked or underestimated.[1]

[1] A. G. Butchers, "Social Education through the Correspondence School," *Report of the First International Conference on Correspondence Education*, pp. 61 ff. Victoria, British Columbia: Department of Education, 1938.

STATE-WIDE PROGRAMS NEEDED

Most, if not all, of our states are urgently in need of correspondence centers the function of which is to develop, or at least to obtain, individualized lesson materials and to provide instruction by extension. At the elementary-school level—and it is to that phase of school work that this article particularly relates—one teacher generally instructs the pupil in all his work just as is commonly true in the resident school. The establishment of a state center in no way jeopardizes existing school-district organizations. These may well remain intact even where correspondence education is substituted for work in a regularly organized school. In the United States, with its strong and probably desirable traditions of district autonomy, it would not be wise for the correspondence center to deal directly with pupils without first obtaining the permission of the local school authorities. In districts where a regular school is maintained but where certain isolated or incapacitated children are to take their work by correspondence, close contact should be maintained with the local superintendent or teacher since such a resident representative may do much to motivate and encourage the pupils.

CONCLUSION

Have educators not been shortsighted, then, in their insistence that there are only two ways by which rural boys and girls may obtain an education, that is, by attending the one-room school or by attending the consolidated school? Equality of educational opportunity requires that discrimination no longer be made against children for whom transportation is not feasible and who live so far from the nearest school that they are seriously handicapped in obtaining an education. For these children, as well as for those who are physically incapacitated and cannot get to school, home-study courses during at least part of their school lives will do much to eliminate the inequality and the hardship that now prevail. Fortunately this solution is not unduly expensive. It is so inexpensive, in fact, that many one-room schools with small enrolments might better be discontinued and the pupils permitted to obtain their schooling at home. For the rural areas, then, schooling should mean the one-room school or consolidation *or home study*. To leave this last method unused is to deny their rightful educational opportunity to many thousands of boys and girls in the United States.

RELATION OF LACK OF ONE OR BOTH PARENTS TO SCHOOL PROGRESS

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PURPOSE OF THE STUDY

NO PROOF need be presented to support the thesis that environment affects school progress. If the lack of one or both parents in the home seriously affects school progress, educators must give to the children so handicapped special attention. In many large school districts the child-accounting system fails to record the fact of the lack of parents in the home. In even more districts no attempt is made to keep the information up to date.

The writer is a teacher in a large junior high school in a large city. In trying to discover reasons for the retardation of one of his pupils, he was brought forcibly to face with the fact that no record was kept which would reveal the lack of parents in the home of a pupil. This study was undertaken to find out to what extent such lack is a vital factor in school progress.

METHOD PURSUED

A questionnaire which asked the following four questions was given to every pupil: "(1) Is your father living? (2) Is your mother living? (3) Are you living with both parents? (4) If the answer to No. 3 is 'no,' with whom are you living?"

No child was compelled to answer if he did not wish to do so. About 90 per cent (1,625 pupils) of those present answered. There were 235 pupils who reported the absence of one or both parents in the home.

From the school records the following information was obtained: the intelligence quotient of each child, the amount of over-ageness for the grade, marks in co-operation assigned by the teachers, the number of failures in various subjects made by each pupil, the num-

ber of pupils who attained scholastic honors, histories of maladjustment cases handled by the school counselor, the number of pupils elected to school-government offices, and the number of reported physical defects for each child.

The group lacking parents and the remainder of the pupils in the school were compared with respect to the eight factors mentioned. When it was discovered that the group lacking parents had a lower median intelligence quotient than the other pupils in the school, a random sampling of pupils who as a group revealed the same median intelligence quotient was studied, every effort being made to keep conditions the same. The boys and girls in the group under investigation were matched with the exact number of boys and girls of the same grade and section with similar intelligence quotients. Three groups were thus created: Group A, pupils lacking parents; Group B, pupils who were of the same sex and had the same intelligence quotients as pupils in Group A but who lived with their parents; and Group C, the remainder of the student body. All the research and the tabulating were done by the writer.

INFORMATION SECURED

Briefly summarized, the findings are as follows: Of the 1,625 pupils who answered the questionnaire, 235 (14.5 per cent) or about one out of seven, lack one or both parents in the home. Detailed data with regard to the parent lost are given in Table 1. Of the 235 pupils lacking a parent, 62 per cent lack fathers compared with 29 per cent who lack mothers. The percentage of the pupils who lack fathers for reasons other than death (20.8) is over five times as great as the percentage who lack mothers for similar reasons (3.8).

Of the pupils who lack one or both parents, half live with their mothers alone, a sixth live with their fathers alone, a sixth live with one parent and a stepparent, and the remaining sixth live with various other persons.

The extent to which the lack of one or both parents affects school progress is shown in Table 2. Although the median intelligence quotient of the group lacking parents (Group A) is practically the same as that of the group matched with them (Group B), the percentage of over-ageness, the percentage of pupils receiving marks of

TABLE 1

DISTRIBUTION OF 235 CHILDREN LACKING PARENTS ACCORDING TO WHICH PARENT IS LACKING AND ACCORDING TO PERSONS WITH WHOM CHILDREN LIVE

	Number	Per Cent
Parent lacking:		
Father	146	62.1
Mother	68	29.0
Both	21	8.9
Total	235	100.0
Reason for lack of parent:		
Father dead	97	41.3
Mother dead	59	25.1
Father away	49	20.8
Both away	14	6.0
Mother away	9	3.8
Both dead	7	3.0
Total	235	100.0
Child lives with:		
Mother alone	118	50.2
Father alone	38	16.2
Father and stepmother	22	9.3
Mother and stepfather	18	7.7
Aunt	14	6.0
Guardian	14	6.0
Grandparents	9	3.8
Orphanage	1	0.4
Sister	1	0.4
Total	235	100.0

TABLE 2

SCHOOL PROGRESS OF GROUP A (235 PUPILS LACKING ONE OR BOTH PARENTS) OF GROUP B (235 PUPILS MATCHED WITH PUPILS IN GROUP A BUT POSSESSING BOTH PARENTS), AND OF GROUP C (REMAINDER OF STUDENT BODY)

Item Compared	Group A	Group B	Group C
Median intelligence quotience	109	109.5	114
Percentage of over-age pupils	24	10	14
Percentage of pupils marked "excellent" in co-operation	36	44	55
Percentage of pupils marked "good" in co-operation	41	40	27
Percentage of pupils marked "fair" in co-operation	19	14	15
Average number of failures per pupil	0.34	0.25	0.29
Percentage of pupils on honor roll	24	34	36
Percentage of pupils referred to counselor as special cases	9	4	6
Percentage of pupils elected to school-government offices	4	7	7
Average number of physical defects per pupil	2.2	1.4	1.9

only "fair" in co-operation, the number of failures, and the percentage of pupils receiving the attention of the school counselor are all greater in the case of Group A than in the case of Group B. The data for the remainder of the student body are even more unfavorable to the group lacking parents.

CONCLUSIONS AND RECOMMENDATIONS

There are more children who lack one or both parents than the average teacher supposes. To put it another way, every classroom row of pupils has a child who lacks one or both parents in the home. More children lack a father in the home than lack a mother. Children are more likely to live with their mother when lacking a father than to live with the father if the mother is lacking.

There appears to be some relation between retarded school progress and the lack of a parent in the home. The lack of one or both parents seems to affect every phase of school work unfavorably. Even if the difference between the groups is not large, the result always favors the groups with parents. It seems, in the school studied at least, that the lack of one or both parents in the home affects the child's intelligence quotient unfavorably, increases the amount of over-ageness, increases the number of failures in school subjects, decreases the likelihood of the child's becoming a leader in the school community, increases his chance of becoming a special problem case for the school counselor, and has some slight effect on health.

These findings indicate (1) that child-accounting systems should include a record of the presence or the lack of one or both parents in the home, (2) that this record should be corrected annually, (3) that further study should be made of this problem, and (4) that teachers should be made aware of the startling frequency with which this situation arises and the deleterious effects on school progress of the lack of one or both parents in the home.

URBAN AND RURAL ENROLMENT TRENDS

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*

IN TWO earlier articles in the *Elementary School Journal* the writer discussed national[1] and state[2] enrolment trends. The present article offers a consideration of urban-rural enrolment differences, by states and by grades. The basic data are presented in Tables 1 and 2, from which, however, preprimary and postgraduate pupils and pupils enrolled in the District of Columbia have been omitted.

From 1932 to 1936 urban-school enrolments in the forty-eight states taken as a whole decreased by 1 per cent, while rural-school enrolments increased by 2 per cent. Much variation exists, however, among the states. To indicate only the extreme cases, urban enrolments increased 9 per cent in South Dakota but decreased 50 per cent in Louisiana; rural enrolments increased 44 per cent in Rhode Island but decreased 14 per cent in New Mexico.

No definite regional trends are discernible.[3] If one may for the moment assume (as all educational data seem to suggest) that Maryland and West Virginia may be included in the Southeast, that region appears to manifest noticeably distinct characteristics in enrolment trends. Urban enrolments there exhibit a pronounced decline, while rural enrolments have sharply increased. This trend, however, is not characteristic of all states in this region. Similarly, although the states in the Middle region show, in general, a slight decline in rural and a correspondingly slight increase in urban enrolments, Illinois stands out as a fairly distinctive exception. Apart from Maryland and West Virginia, Rhode Island is the most

[1] O. L. Harvey, "Enrolment Trends and Population Shifts," *Elementary School Journal*, XXXVIII (May, 1938), 655–63.

[2] O. L. Harvey, "Enrolment Trends in Elementary School Grades, by States," *Elementary School Journal*, XXXIX (November, 1938), 200–211.

[3] The regions here referred to coincide with those of the National Resources Committee and are indicated in the tables.

marked exception in the Northeast, New Mexico in the Southwest, Utah in the Northwest, and Oregon in the Far West.

On the basis of such exceptional cases as these, it would appear doubtful that the difference between urban and rural enrolment trends is related to population shifts alone. State educational administrative policy would seem also to be involved. Indeed, the more carefully one scrutinizes the tables in detail, the more does the picture suggest state rather than regional trends. Some degree of homogeneity is suggested, as in such groups of adjoining states as Maryland, West Virginia, and Virginia; Florida, Georgia, and Alabama; North and South Dakota; and some of the Middle states. Even then, however, examination of the detail of trends by grades reveals that this apparent homogeneity is tenuous.

Examination of grade trends tends to support this conclusion. In both urban and rural areas total enrolments have declined in the first four grades, but the more rapidly in urban areas. Enrolments in Grade V decreased 4 per cent in urban areas but increased 2 per cent in rural areas. In all grades above Grade V enrolments have increased, but more markedly in rural than in urban areas.[1] This increase is particularly emphatic at the secondary level in rural areas. It would seem then that, in general, urban enrolments have decreased most noticeably in the lower grades and have increased slightly at the upper levels, while rural enrolments have declined less rapidly at the lower levels but have shown marked acceleration in the secondary grades.

This observation is interesting. It suggests that enrolments in urban areas have, in general, reached their peak in the elementary schools and are approximating the peak in the high schools. In rural areas, on the other hand, although the peak in elementary enrolments is not far distant, improvement in grading and promotion is still taking place in the first two grades, while expansion is taking place at the secondary level. If more extensive statistical data were available, it is not improbable that they would reveal in rural enrolments the tardy development of trends which already have had their effects on urban enrolments.

[1] The exception, Grade VIII, is in large part attributable to the fact that seven states, indicated in the tables by daggers, operate chiefly or entirely on the seven-four plan.

TABLE 1

PERCENTAGE INCREASE* IN URBAN-SCHOOL ENROLMENTS IN 1932–36, BY GRADES AND BY STATES

STATE	PERCENTAGE INCREASE IN GRADE												
	Total	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
United States	− 1	−13	−12	− 8	− 6	− 4	1	4	5	6	13	14	20
Far West:													
California	1	−10	− 6	− 2	2	− 7	10	13	12	− 3	− 4	− 1	6
Nevada	3	− 7	−10	− 5	3	− 1	0	10	6	− 5	26	10	23
Oregon	− 4	−17	−13	−10	−12	−11	− 3	− 1	3	8	7	2	3
Washington	− 4	−13	−10	− 9	−10	− 8	− 7	0	3	2	2	5	− 3
Northwest:													
Idaho	7	4	− 3	2	5	2	13	5	4	18	11	14	19
Utah	−28	−19	−32	−31	−31	−30	−29	−50	−54	−30	−24	−16	80
Colorado	2	− 8	− 8	− 8	− 6	2	2	11	11	8	15	10	13
Wyoming	− 7	−22	−22	−22	−12	−16	− 8	2	− 6	21	4	− 7	24
Montana	− 1	−23	−13	−19	−22	−16	−15	− 9	17	26	50	60	49
North Dakota	8	14	− 1	4	3	3	5	17	14	12	2	9	19
South Dakota	9	44	74	− 5	− 3	− 3	5	8	10	17	14	4	15
Nebraska	− 1	−11	−12	− 8	− 4	4	4	7	6	2	13	− 2	6
Kansas	− 2	−34	−10	− 3	− 3	3	5	10	11	8	8	7	9
Middle:													
Missouri	4	− 8	− 6	− 1	− 1	6	11	21	6	− 2	5	2	45
Iowa	3	− 7	− 7	− 2	− 3	− 3	1	7	5	10	15	9	16
Minnesota	0	−11	−14	− 9	− 7	− 6	0	5	0	10	10	13	18
Wisconsin	4	−10	− 9	− 5	− 3	− 1	3	7	4	10	14	14	21
Michigan	4	− 4	− 7	1	3	2	9	6	7	8	5	8	17
Illinois	− 2	−19	−12	− 9	− 5	− 5	− 2	1	− 1	9	11	22	35
Indiana	3	− 4	− 9	− 6	− 2	0	0	9	10	15	12	14	14
Ohio	1	−10	−11	− 7	− 3	− 3	4	5	5	4	12	14	26
Northeast:													
Pennsylvania	1	−17	−14	− 9	− 7	− 6	− 4	2	6	15	24	23	31
New York	3	− 9	− 8	− 7	− 5	− 5	− 2	2	6	8	25	34	42
Maine	6	− 5	− 1	1	5	8	16	18	− 1	2	17	9	21
New Hampshire	2	−14	− 9	−12	−10	− 6	− 2	5	− 3	11	17	27	58
Vermont	− 3	− 1	−10	1	−10	−14	− 9	− 9	− 5	1	15	2	15
Massachusetts	0	− 8	−13	−10	− 9	− 7	− 5	2	4	5	17	20	26
Rhode Island	− 3	−15	−15	−11	− 7	− 7	− 4	7	8	0	21	16	− 3
Connecticut	− 3	−17	−17	−15	− 8	− 9	− 8	4	− 3	10	21	22	37
New Jersey	0	−19	−18	−15	−10	−10	− 6	1	9	18	35	42	52
Delaware	2	−12	− 6	− 6	− 5	−11	− 9	− 3	− 5	10	31	39	35
Maryland†	−22	−21	−21	−22	−16	−22	−24	−26	−20	−25	−27	−29	−23
West Virginia†	−12	19	− 9	− 6	− 5	− 7	− 4	− 7	−10	−34	−42	−47	−43
Southeast:													
Kentucky	2	−11	−11	− 9	− 1	6	11	11	15	11	16	7	18
Tennessee	0	−21	−11	− 5	− 4	0	4	8	2	22	47	50	18
Virginia†	−10	−27	−24	−20	−12	−11	−10	− 9	30	2	21	16	7
North Carolina†	1	− 9	− 5	− 3	− 6	4	26	16	‡	10	8	4	5
South Carolina†	4	−18	−12	− 1	0	7	14	23	‡	20	38	22	21
Florida	−14	−18	−12	− 6	− 7	−13	−14	− 5	−10	−20	−26	−27	−14
Georgia†	−30	−41	−39	−33	−35	−32	−23	−25	−15	−18	−17	− 9	−18
Alabama	−13	−16	−22	−23	−14	−10	− 8	−15	9	− 4	− 7	−17	−11
Mississippi	6	− 9	− 9	− 2	3	4	16	18	16	23	26	30	32
Louisiana†	−50	−57	−58	−52	−49	−44	−43	−40	‡	−38	−43	−53	−50
Arkansas	11	3	4	9	11	12	17	15	17	21	12	9	15
Southwest:													
Oklahoma	0	− 9	− 9	− 7	− 7	0	2	10	13	7	9	13	6
Texas†	5	− 9	−14	− 4	1	10	49	19	‡	7	22	6	6
New Mexico	7	2	− 2	1	17	6	10	19	12	7	13	3	11
Arizona	3	7	− 4	− 1	1	0	0	9	5	7	14	17	−18

* Percentage increase was computed as follows: Enrolment in 1936 was determined as a percentage of the 1932 enrolment. The difference between the figure thus obtained and 100 yielded the percentage increase (or decrease). Data were derived from Tables 38 and 39 in "Statistics of State School Systems, 1931–32," *Biennial Survey of Education in the United States: 1930–1932* (United States Office of Education Bulletin No. 2, 1933) and Tables 39 and 40 in "Statistics of State School Systems, 1935–36," *Biennial Survey of Education in the United States: 1934–1936*, Vol. II (United States Office of Education Bulletin No. 2, 1937).

† In states marked with a dagger, most or all of the schools are on the seven-four plan.

‡ No enrolments in Grade VIII.

TABLE 2

PERCENTAGE INCREASE* IN RURAL-SCHOOL ENROLMENTS IN 1932–36, BY GRADES AND BY STATES

STATE	PERCENTAGE INCREASE IN GRADE												
	Total	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
United States	2	− 8	− 4	− 2	− 1	2	3	9	2	27	23	23	26
Far West:													
California	8	−25	−22	−18	−14	−13	− 3	12	14	83	98	90	96
Nevada	− 2	−14	− 9	− 7	1	− 5	− 5	2	1	44	− 3	6	− 6
Oregon	−13	−44	−19	−19	−22	−17	−17	−10	− 7	3	15	16	16
Washington	− 4	−12	− 8	− 8	− 8	− 8	− 7	1	− 11	18	19	23	− 23
Northwest:													
Idaho	− 1	− 6	− 3	− 4	− 6	− 4	− 9	− 5	− 6	1	14	21	29
Utah	31	39	20	16	18	20	25	49	66	− 9	244	53	3
Colorado	− 8	−16	−17	−15	−16	−14	−12	4	0	23	20	18	3
Wyoming	4	2	− 3	− 3	− 3	0	6	16	5	13	14	3	17
Montana	− 5	4	− 6	−10	− 7	−10	−10	− 3	− 20	− 6	5	1	17
North Dakota	− 8	−12	− 8	− 9	−10	−11	−11	− 8	− 13	3	1	1	5
South Dakota	−10	−22	−15	−16	−13	−13	−13	− 8	− 15	7	20	12	7
Nebraska	− 8	−18	−14	−13	−12	−13	− 7	− 4	− 11	3	4	15	14
Kansas	− 4	6	−14	−17	−11	− 8	− 7	− 6	1	9	12	5	2
Middle:													
Missouri	4	−19	5	13	9	33	− 2	48	− 9	20	− 18	− 2	− 22
Iowa	− 6	− 4	−17	−13	−12	−11	− 8	− 4	− 4	4	7	2	6
Minnesota	− 5	−20	−11	− 8	− 7	−10	− 5	− 7	− 3	23	28	12	26
Wisconsin	− 6	−14	−11	− 9	− 4	− 6	0	4	0	9	− 12	− 15	− 13
Michigan	− 8	−33	−28	−26	−23	−14	−12	− 6	− 13	83	56	54	117
Illinois	−13	− 2	−16	−13	−20	−16	−14	− 3	− 11	− 39	− 5	0	7
Indiana	− 1	−14	− 7	− 6	− 2	− 1	3	6	3	9	8	5	12
Ohio	− 2	−17	−11	− 9	− 9	− 6	− 7	6	1	24	21	20	25
Northeast:													
Pennsylvania	0	−14	−11	− 6	− 7	− 4	2	4	7	22	27	31	38
New York	3	−17	−14	−12	−11	−10	− 6	− 3	− 6	24	86	102	112
Maine	1	−15	−11	−10	− 6	− 5	− 7	16	43	34	2	5	3
New Hampshire	5	2	0	2	− 1	− 1	3	14	9	16	10	7	22
Vermont	5	− 1	6	0	4	8	11	25	12	− 13	− 7	− 9	13
Massachusetts	− 4	−25	− 5	− 8	− 5	6	22	− 2	4	− 9	− 18	− 7	2
Rhode Island	44	83	36	25	47	49	− 5	72	94	47	− 9	76	− 12
Connecticut	− 3	−12	−20	−20	−22	−16	−27	45	129	1	8	41	19
New Jersey	− 4	−13	−16	−10	−10	− 8	− 5	1	2	− 7	25	141	92
Delaware	3	− 3	5	0	− 8	− 5	−13	3	5	61	73	7	22
Maryland†	35	18	20	23	24	28	34	49	123	70	67	68	78
West Virginia	14	− 8	2	1	3	9	21	35	17	67	85	74	87
Southeast:													
Kentucky	3	− 2	− 5	− 2	6	0	16	− 4	3	22	28	4	28
Tennessee	2	− 5	− 1	2	4	5	6	8	5	22	0	2	24
Virginia†	6	− 6	− 4	− 1	− 1	9	18	25	‡	36	38	40	39
North Carolina†	3	−15	− 3	− 2	3	9	8	18	‡	35	33	31	29
South Carolina†	0	−10	1	0	0	2	5	10	‡	10	17	21	23
Florida	28	−29	18	19	27	39	47	57	66	118	313	208	136
Georgia†	13	− 3	13	13	13	18	19	25	863	28	41	27	54
Alabama	12	7	12	9	7	8	8	27	25	38	36	44	21
Mississippi	4	12	0	2	4	2	0	− 2	− 2	1	0	− 2	2
Louisiana†	34	− 1	32	27	37	46	63	60	‡	70	86	21	179
Arkansas	1	− 2	2	3	− 2	− 3	1	3	1	11	11	11	24
Southwest:													
Oklahoma	− 3	−13	−10	− 8	− 5	− 4	0	1	− 1	17	12	15	15
Texas†	4	− 7	− 5	2	7	13	6	10	‡	22	6	18	40
New Mexico	−14	−29	− 8	−10	− 6	− 9	− 4	− 3	− 6	− 13	− 10	− 9	− 4
Arizona	7	−11	3	16	0	16	18	20	5	44	21	22	27

* Percentage increase was computed as follows: Enrolment in 1936 was determined as a percentage of the 1932 enrolment. The difference between the figure thus obtained and 100 yielded the percentage increase (or decrease). Data were derived from Tables 38 and 39 in "Statistics of State School Systems, 1931–32," *Biennial Survey of Education in the United States: 1930–1932* (United States Office of Education Bulletin No. 2, 1933) and Tables 39 and 40 in "Statistics of State School Systems, 1935–36," *Biennial Survey of Education in the United States: 1934–1936*, Vol. II (United States Office of Education Bulletin No. 2, 1937).

† In states marked with a dagger most or all of the schools are on the seven-four plan.

‡ No enrolments in Grade VIII.

Examination of urban and rural enrolment trends by grades in the various states results in a confused impression, in which the following points are suggested but none is adequately confirmed:

1. In general, the individual states tend to reflect national trends. In other words, enrolments tend to decline throughout the earlier grades and to increase throughout the upper grades. These tendencies are particularly marked in the urban lower and the rural upper grades. There are, however, many marked exceptions. Urban enrolments in Grade II in South Dakota, for example, have increased 74 per cent, while rural twelfth-grade enrolments in Rhode Island have dropped 12 per cent.

2. Fluctuations from grade to successive grade in the same state are sometimes so eccentric as to suggest inaccurate statistical reporting, vagueness in grade definition, or the effects of some specific but unexplained administrative policy. Otherwise how account for such peculiarities as may be observed, by way of illustration, in rural and urban enrolments in Grade IX in Nevada, rural enrolments in Grade VI in Massachusetts, rural enrolments in Grade XI in Kentucky, urban enrolments in Grade XII in Utah, and urban enrolments in Grade VIII in Alabama? Obviously some of these apparent discrepancies are attributable to the smallness of the enrolment, but not all.

3. In a few states there would appear to have been a drastic shift in population from rural to urban centers, or vice versa, affecting not only the urban and the rural enrolments as totals but also the enrolment in each specific grade. Thus, in Utah rural enrolments have increased 31 per cent, while urban enrolments decreased 28 per cent, and correspondingly large changes are evident in the constituent grades. The same kind of phenomenon occurs in Rhode Island, in which, however, individual grade variations are less consistent with the total than they are in Utah. Maryland and several states in the Southeast, such as Louisiana, present profiles like that for Utah. West Virginia's is more erratic, like that for Rhode Island. The most interesting illustration in this series is New Mexico, in which—the very reverse of the trends mentioned here—there has been a consistent increase in urban grades even at the secondary level with corresponding loss of enrolments in rural

grades. Over-all grade-enrolment shifts such as these strongly suggest the probability of urban-rural or rural-urban migration within the states indicated. Why such "migration" should so frequently be limited to relatively isolated states, and not be reflected in surrounding regions, is a problem which can be answered only after more detailed analysis on the basis of much information relating to population movements and educational administrative policy.

4. Some states reveal a gradual shift in percentage change from one grade to the next, with a relatively limited range of variation. Thus, with minor exceptions, urban enrolments in Pennsylvania and rural enrolments in Oklahoma progress fairly smoothly from a slight decrease in Grade I through to a relatively slight increase in Grade XII. In other states, such as urban Illinois or rural Minnesota, the trend is similarly gradual but with a more pronounced range, resulting in a profile which may be represented by an exaggerated *U*. Variations of this general profile are to be found elsewhere, yielding *J*-shaped curves, suggesting that the point of greatest inertia lies toward either the lower or the upper end of the grade scale. Many states, on the other hand, present *V*-shaped profiles. In general, however, the phenomenon is found to be repeated throughout the states: the profiles are variants of the national profile, but with greater or less degree of exaggeration, distortion, or smoothness.

In a summing-up and interpretation of the evidence relating to the comparison between urban and rural enrolment trends from 1932 to 1936, the following tentative conclusions may be suggested:

1. It is probable that shifts in population structure are affecting primary-school enrolments. If so, the influence of this factor is more pronounced in urban than in rural areas. There are, however, marked exceptions to this generalization.

2. The demand for higher educational qualifications, possibly in combination with the relative dearth of employment opportunities for youth, is presumably resulting in increased secondary-school enrolments. The influence of this factor is particularly pronounced in rural areas. There are also marked exceptions to this generalization.

3. Developments in rural enrolments give the impression that they are the delayed recapitulation of urban enrolment develop-

ments of earlier years but somewhat accelerated by the effects of recent social and economic trends and, therefore, exaggerated in form.

4. Although well-defined regional trends are not clearly apparent, there is some suggestive evidence of subregional homogeneity, especially in the Southeast. To this extent the evidence suggests the influence of major social, demographic, and economic factors.

5. The egregious behavior of enrolment trends in several individual states, on the contrary, suggests that educational administrative practices are still potent enrolment determinants. Such administrative practices would seem to be especially significant in the existing differences between urban and rural enrolment developments.

6. For an adequate understanding of enrolment trends it is obviously not enough to report state totals. Rural and urban categories are essential. As the writer has demonstrated in another article,[1] negro and white data are also necessary. All the evidence clearly indicates the importance of grade data, and the significance of age-grade distributions, concerning which little is known, becomes more and more evident. In view of the projected population census of 1940, it would prove of inestimable value if school administrators could see their way clear to prepare and publish, for at least that particular year, a complete analysis of school enrolments in their respective states, in urban and rural areas and by color, grade, and age. If similar data relating to private schools could be provided, the most comprehensive analysis of school enrolments to date would be possible.

[1] O. L. Harvey, "Negro Representation in Public School Enrolments," *Journal of Negro Education*, VIII (January, 1939), 26–30.

SELECTED REFERENCES ON PRESCHOOL AND PARENTAL EDUCATION

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THIS bibliography covers the period from December 1, 1937, to December 1, 1938. As in preceding years the following classes of books and articles have been omitted: (1) foreign-language publications, (2) textbooks and reviews, and (3) popular articles containing little new material. An attempt has been made to list the most important publications of the year in the field covered, but it is probable that some unintentional oversights have occurred.

TECHNICAL AND EXPERIMENTAL STUDIES[1]

121. ANDRUS, RUTH, and HOROWITZ, EUGENE L. "The Effect of Nursery School Training: Insecurity Feelings," *Child Development*, IX (June, 1938), 169–74.

Low positive correlations were found between length of time spent in nursery school and feelings of insecurity as rated by teachers.

122. BARUCH, DOROTHY WALTER. "A Study of Reported Tension in Interparental Relationships as Co-existent with Behavior Adjustment in Young Children," *Journal of Experimental Education*, VI (December, 1937), 187–204.

A number of factors in the marital relations of parents as reported by themselves were found to be significantly related to the adjustments of their children as observed in the nursery school.

123. BAYLEY, NANCY, and JONES, HAROLD E. "Environmental Correlates of Mental and Motor Development: A Cumulative Study from Infancy to Six Years," *Child Development*, VIII (December, 1937), 329–41.

No correlations were found between various environmental indexes and mental-test scores previous to the age of eighteen months. Thereafter correlations increase sharply, reaching a maximum during the third year of life. Theoretical implications are discussed.

[1] See also Item 650 (Sowers) in the list of selected references appearing in the November, 1938, number of the *Elementary School Journal*.

124. BERNHARDT, KARL S., MILLICHAMP, DOROTHY A., CHARLES, MARION W., and MCFARLAND, MARY P. *An Analysis of the Social Contacts of Preschool Children with the Aid of Motion Pictures.* University of Toronto Studies, Child Development Series, No. 10. Toronto, Canada: University of Toronto Press, 1937. Pp. 54.

Fifteen day-nursery children between the ages of two and four years were observed individually for ten-minute periods once a month over a period of four months. Although increase in chronological age showed no clear-cut quantitative relation to social behavior, marked qualitative changes in the form and the pattern of social reactions were observed. These changes involved both the dropping-out of earlier responses and the addition of new forms of reaction.

125. BIJOU, S. W. "The Performance of Normal Children on the Randall's Island Performance Series," *Journal of Applied Psychology*, XXII (April, 1938), 186–91.

In spite of the fact that these tests were standardized for low-grade mental defectives, they may be successfully used with normal children of preschool age without modification of procedure or norms.

126. CAMERON, NORMAN. "Individual and Social Factors in the Development of Graphic Symbolization," *Journal of Psychology*, V (January, 1938), 165–84.

A study of the interrelations between graphic symbolization as shown in drawings and the development of verbal language and group organization in young children.

127. DENNIS, WAYNE. "Historical Notes on Child Animism," *Psychological Review*, XLV (May, 1938), 257–66.

Shows that Piaget's views on child animism were expressed in practically identical form by many earlier psychologists and philosophers.

128. DENNIS, WAYNE. "Infant Development under Conditions of Restricted Practice and of Minimum Social Stimulation: A Preliminary Report," *Pedagogical Seminary and Journal of Genetic Psychology*, LIII (September, 1938), 149–57.

No clear evidence of retardation was apparent in two infants reared in a very limited environment. The conclusion is that within the first year the infant will "grow up" of himself.

129. DREXLER, ETHEL NATALIE. "A Study of the Development of the Ability To Carry a Melody at the Preschool Level," *Child Development*, IX (September, 1938), 319–32.

Describes a simple and a fairly objective method for evaluating the ability of a child to carry a melody. Gives the results of applying the method to twenty-three cases between the ages of three and six years.

130. DUBNOFF, BELLE. "A Comparative Study of Mental Development in Infancy," *Pedagogical Seminary and Journal of Genetic Psychology*, LIII (September, 1938), 67–73.

A comparison of the mental development of infants in Soviet Russia with that of the California infants studied by Nancy Bayley by means of the California First-Year Mental Scale (*Mental Growth during the First Three Years.* Genetic Psychology Monographs, Vol. XIV, No. 1. Worcester, Massachusetts: Clark University Press, 1933).

131. FRANK, ALMA. "A Study in Infant Development," *Child Development*, IX (March, 1938), 9–26.

Shows that the muscular responses of infants who are "put through" a motor act by adults are observably different from those occurring when the act is spontaneously performed by the child himself. In the former cases the muscular contractions are localized and jerky and show much rigidity and tension; in the latter they are smooth running and integrated with each other and give the appearance of flexibility and ease.

132. GESELL, ARNOLD, and THOMPSON, HELEN, assisted by CATHERINE STRUNK AMATRUDA. *The Psychology of Early Growth.* New York: Macmillan Co., 1938. Pp. x+290.

Provides further normative standards on various aspects of infant development.

133. GOLDSTEIN, KURT. "A Further Comparison of the Moro Reflex and the Startle Pattern," *Journal of Psychology*, VI (July, 1938), 33–42.

Regards the startle pattern as a later form of reaction occurring in infants only after the nervous system has reached a given degree of maturity, whereas the Moro reflex is a primitive response and as such an expression of neurological immaturity.

134. GOODENOUGH, FLORENCE L. "The Use of Pronouns by Young Children: A Note on the Development of Self-Awareness," *Pedagogical Seminary and Journal of Genetic Psychology*, LII (June, 1938), 333–46.

Although the total percentage of pronouns in records of spontaneous language behavior of young children shows little change with age after the age of three, certain specified groups of pronouns show marked changes with age and with the conditions of observation.

135. GRIDLEY, PEARL FARWELL. *Graphic Representation of a Man by Four-year-old Children in Nine Prescribed Drawing Situations.* Genetic Psychology Monographs, Vol. XX, No. 2. Provincetown, Massachusetts: Journal Press, 1938. Pp. 183–350.

The four-year-old child is able to make some modifications of his drawing in response to verbal instruction from an adult.

136. HATTWICK, LABERTA A. "Sex Differences in Behavior of Nursery School Children," *Child Development*, VIII (December, 1937), 343–55.

A study of 579 children between the ages of two and four years shows that boys exceed girls in frequency of aggressive, extroverted behavior, undesirable work habits, speech defects, and handling genitals. Girls exceed boys in withdrawing, introverted tendencies, twisting hair, and refusing food. Within the ages studied, sex differences showed little or no relation to increasing age.

137. HATTWICK, LABERTA A., and SANDERS, MOLLIE KROM. "Age Differences in Behavior at the Nursery School Level," *Child Development*, IX (March, 1938), 27–47.

A statistical summary of the behavior difficulties most characteristic of each half-year age level from two to four years.

138. HERRING, AMANDA. "An Experimental Study of the Reliability of the Bühler Baby Tests," *Journal of Experimental Education*, VI (December, 1937), 147–60.

Although the correlation between odd and even items on single tests is reasonably high, that between scores on tests given during the early and the late months of the first year is very low. This finding corroborates others on the same topic in showing that infant tests are not dependable indexes of later mental status.

139. HONZIK, MARJORIE PYLES. "The Constancy of Mental Test Performance during the Preschool Period," *Pedagogical Seminary and Journal of Genetic Psychology*, LII (June, 1938), 285–302.

Constancy of the intelligence quotient varies with the age of the child at the first test and the interval between testings. Tests given before the age of two are of negligible significance for predicting mental level at the age of six or later.

140. HONZIK, MARJORIE P., and JONES, HAROLD E. "Mental-physical Relationships during the Preschool Period," *Journal of Experimental Education*, VI (December, 1937), 139–46.

Seriatim study of 252 children between the ages of twenty-one months and seven years shows a low positive correlation between mental and physical measurements at all ages. The correlation between mental measurements and measurements of socio-economic status increases with age, but the relation of the latter to physical status does not vary with age.

141. HULL, CLARK L. "The Goal-Gradient Hypothesis Applied to Some Field-Force Problems in the Behavior of Young Children," *Psychological Review*, XLV (July, 1938), 271–99.

A theoretical consideration of some of the typical problems in child behavior that have been explored by Lewin, with a reinterpretation and derivation of laws of behavior on the basis of the goal-gradient hypothesis.

142. HUNT, WILLIAM A., and LANDIS, CARNEY. "A Note on the Difference between the Moro Reflex and the Startle Pattern," *Psychological Review*, XLV (May, 1938), 267–69.

Contrary to the statements of Pratt and of Peifer, the startle pattern is not identical with the Moro reflex. The startle pattern is essentially a flexion response, while the Moro is chiefly an extension response.

143. JENSS, RACHEL M., and BAYLEY, NANCY. "A Mathematical Method for Studying the Growth of a Child," *Human Biology*, IX (December, 1937), 556–63.

Presents a mathematical formula for studying growth, by means of which growth in different functions may be directly compared.

144. JERSILD, ARTHUR T., and FITE, MARY D. "Children's Social Adjustments in Nursery School," *Journal of Experimental Education*, VI (December, 1937), 161–66.

Although it is probable that attendance at nursery school may have some generalized effect on the social adjustment of children, much of the apparent improvement appears to be merely a carrying-over of specific reactions to individual companions in a specific situation.

145. JERSILD, ARTHUR T., and RITZMAN, RUTH. "Aspects of Language Development: The Growth of Loquacity and Vocabulary," *Child Development*, IX (September, 1938), 243–59.

There is a definite slowing-up in the rate of gain in language skills after the age of three and a half years. The correlation between intelligence quotient and language development is higher for children under three than for those between three and four.

146. JOHNSON, BUFORD. "Development of Thought," *Child Development*, IX (March, 1938), 1–7.

Comparison of the patterns of performance of preschool children and college students in the solving of unfamiliar problems suggests that the similarities between the two groups in the formation of new concepts outweigh the differences but that the children are somewhat less hidebound by traditional forms of response and thus more ready to profit by experiences which are favorable for the development of thought.

147. KATZ, EVELYN. *Some Factors Affecting Resumption of Interrupted Activities by Preschool Children.* Institute of Child Welfare Monograph No. 16. Minneapolis, Minnesota: University of Minnesota Press, 1938. Pp. x+52.

An experiment designed to test Lewin's theory that activities interrupted before their completion are likely to be resumed in spite of the presence of competing stimuli. The results conform to the Lewin hypothesis in a marked degree.

148. KUBO, YOSHIHIDE. "The Behavior Inventories and Examinations of Japanese Children," *Pedagogical Seminary and Journal of Genetic Psychology*, LIII (September, 1938), 87–99.

Presents a series of developmental items suitable for each of eleven age levels from four months to six years and gives the percentage of Japanese children succeeding with each item.

149. LODGE, TOWNSEND. "Variation in Stanford-Binet I.Q.'s of Preschool Children According to the Months in Which Examinations Were Given," *Journal of Psychology*, VI (October, 1938), 385–95.

Greater gains were shown during the period from autumn to spring than during the period from spring to autumn regardless of nursery-school attendance or nonattendance.

150. McCaskill, Carra Lou, and Wellman, Beth L. "A Study of Common Motor Achievements at the Preschool Ages," *Child Development*, IX (June, 1938), 141–50.

Describes a series of motor tests suitable for preschool children and reports results obtained from administration of the tests to ninety-eight cases between the ages of two and six years.

151. McDowell, Marion Sill. "Frequency of Choice of Play Materials by Preschool Children," *Child Development*, VIII (December, 1937), 305–10.

Materials used in constructing other objects ranked first in popularity; those involving manipulative skill of small muscles, second.

152. McFarland, Margaret B. "Relationships between Young Sisters as Revealed in Their Overt Responses," *Journal of Experimental Education*, VI (December, 1937), 173–79.

Reactions such as rivalry, protection, sympathy, etc., were recorded and analyzed for twenty pairs of sisters of preschool age who were observed simultaneously in their homes.

153. McGraw, Myrtle B. "Quantitative Behavior Data and the Longitudinal Method: The Moro Reflex," *Human Biology*, IX (December, 1937), 542–48.

By means of an analysis of the developmental change in the Moro reflex in individual cases, the author demonstrates certain advantages of the longitudinal method as contrasted with the cross-sectional study of large groups.

154. Moore, Sallie Beth. "The Use of Commands, Suggestions, and Requests by Nursery School and Kindergarten Teachers," *Child Development*, IX (June, 1938), 185–201.

In the schools studied the number of commands decreased with advancing age and intelligence of the children, while the number of suggestions and requests increased.

155. Nelson, Virginia Lafayette, and Richards, T. W. "Studies in Mental Development: I. Performance on Gesell Items at Six Months and Its Predictive Value for Performance on Mental Tests at Two and Three Years," *Pedagogical Seminary and Journal of Genetic Psychology*, LII (June, 1938), 303–25.

By means of a correlation analysis, certain items were selected from the Gesell schedules and compared with scores at six months and scores on the Merrill-Palmer and the Stanford-Binet test at two and three years.

156. Peiper, Albrecht. "Comments upon J. M. Smith's Work, 'The Relative Brightness Values of Three Hues for Newborn Infants' " (translated by Karl C. Pratt), *Child Development*, VIII (December, 1937), 299–300.

A reply to Josephine M. Smith's criticism ("The Relative Brightness Values of Three Hues for Newborn Infants," *Studies in Infant Behavior*, III, 91–140. University of Iowa Studies in Child Welfare, Vol. XII, No. 1. Iowa City, Iowa:

University of Iowa, 1936) of Peiper's claim that the Purkinje phenomenon can be observed not only in newborn infants in general but even in infants prematurely born. States that Smith has misunderstood his method of computing relative brightness values and that a small number of cases was sufficient since every child reacted in essentially the same manner.

157. POULL, LOUISE E. "The Effect of Improvement in Nutrition on the Mental Capacity of Young Children," *Child Development*, IX (March, 1938), 123–26.

Forty-one children between the ages of two and seven years whose nutritional status was originally "poor" were retested after an average interval of three and a half years during which nutrition had been raised to "good." A mean increase of ten points in the intelligence quotient of this group is compared with no increase for a control group whose nutritional status was unchanged.

158. REDFIELD, JANET E., and MEREDITH, HOWARD V. "Changes in the Stature and Sitting Height of Preschool Children in Relation to Rest in the Recumbent Position and Activity Following Rest," *Child Development*, IX (September, 1938), 293–302.

A temporary increase in standing and sitting height equivalent to two months of normal growth was found to take place in four-year-old children as a result of the afternoon nap.

159. RHODES, ADELE. "A Comparative Study of Motor Abilities of Negroes and Whites," *Child Development*, VIII (December, 1937), 369–71.

Eighty negro children between the ages of two and five years were given the series of motor tests reported in a previous article by Goodenough and Smart ("Interrelationships of Motor Abilities in Young Children," *Child Development*, VI [June, 1935], 141–53). Neither in respect to the weights brought out by a factor analysis nor the mean performance of the different age groups were any significant race differences established.

160. RICHARDS, T. W., and NELSON, VIRGINIA LAFAYETTE. "Studies in Mental Development: II. Analysis of Abilities Tested at the Age of Six Months by the Gesell Schedule," *Pedagogical Seminary and Journal of Genetic Psychology*, LII (June, 1938), 327–31.

A factor analysis of scores made by six-month-old infants on seventeen items of the Gesell schedules indicated that at least three factors, tentatively designated as "testability," "alertness," and "motor ability," are required to account for the correlations involved.

161. RICHARDS, T. W., and NEWBERY, HELEN. "Studies in Fetal Behavior: III. Can Performance on Test Items at Six Months Postnatally Be Predicted on the Basis of Fetal Activity?" *Child Development*, IX (March, 1938), 79–86.

Mothers' reports of fetal activity during the last two months of prenatal life were found to show a high correlation with the scores earned by the children on the Gesell developmental schedules at the age of six months. Possible reasons for this relationship are discussed.

162. ROBERTS, KATHERINE ELLIOTT, and BALL, RACHEL STUTSMAN. "A Study of Personality in Young Children by Means of a Series of Rating Scales," *Pedagogical Seminary and Journal of Genetic Psychology*, LII (March, 1938), 79–149.

Describes a series of rating scales to be used by teachers and parents in analyzing nine aspects of the personality of the preschool child. Gives results of the application of the scales to children in the Merrill-Palmer nursery school.

163. SKEELS, HAROLD M. "Mental Development of Children in Foster Homes," *Journal of Consulting Psychology*, II (March–April, 1938), 33–43.

A study of 147 cases placed in foster-homes before the age of six years showed no relation either between the intelligence quotients of these children in early childhood and the mental status of their true parents or between the intelligence of the children and the level of the education of either the true or the foster-parents.

164. SKODAK, MARIE. "The Mental Development of Adopted Children Whose True Mothers Are Feeble-minded," *Child Development*, IX (September, 1938), 303–8.

Mental tests of sixteen children whose true mothers were feeble-mineded indicated no mental retardation at the ages of two and four years, after placement in foster-homes.

165. SMITH, JOSEPHINE M. "Reply to Peiper," *Child Development*, VIII (December, 1937), 301–4.

In reply to Peiper (Item 156 in this list), Smith defends the use of the statistical average rather than more exhaustive study of a small number of cases on the ground that individual differences are too great to warrant generalizations when only two cases are studied.

166. SNYGG, DONALD. "The Relation between the Intelligence of Mothers and of Their Children Living in Foster Homes," *Pedagogical Seminary and Journal of Genetic Psychology*, LII (June, 1938), 401–6.

A negligible correlation was found between the intelligence quotients of 312 children of preschool age who had been placed in foster-homes in infancy or early childhood and the intelligence quotients of their true mothers.

167. SONTAG, L. W., and RICHARDS, T. W. *Studies in Fetal Behavior: I. Fetal Heart Rate as a Behavioral Indicator*. Monographs of the Society for Research in Child Development, Vol. III, No. 4 (Serial No. 17). Washington: Society for Research in Child Development, National Research Council, 1938. Pp. x+72.

With increasing age, fetal heartbeat decreases in rate but becomes more variable and more responsive to external conditions experimentally introduced.

168. STODDARD, GEORGE D. "Contributions to Education of Scientific Knowledge about Mental Growth and Development," *The Scientific Movement in Education*, pp. 421–34. Thirty-seventh Yearbook of the National So-

ciety for the Study of Education, Part II. Bloomington, Illinois: Public School Publishing Co., 1938.

Research shows that intelligence is not fixed but is affected by environmental stimulation.

169. *Studies in Preschool Education, I.* University of Iowa Studies in Child Welfare, Vol. XIV. Iowa City, Iowa: University of Iowa, 1938.

Part I of this bulletin, "Child Development and Preschool Education," by Ruth Updegraff, outlines the aims of nursery-school education and discusses their relation to known principles of child development. In Part II, "The Behavior of Young Children in Failure," Mary Elizabeth Keister reports that a training program in which young children were introduced to progressively more difficult tasks was found to induce more prolonged effort on the part of the subjects and to lessen such ineffective types of behavior as crying and sulking. Part III, "The Effect of Training upon Singing Ability and Musical Interest of Three-, Four-, and Five-year-old Children," by Ruth Updegraff, Louise Heiliger, and Janet Learned, shows that children who were given special musical training demonstrated not only greater improvement in ability to sing than did a control group without such training but also increased desire to participate in musical activities. In Part IV, "An Objective Method for Recording Three- and Four-year-old Children's Enjoyment of Stories, Particularly Applied to a Study of Fanciful and Realistic Stories," Marjorie Mantor selected, by means of controlled observations, certain criteria for use in indicating degree of enjoyment. Part V, "Literature for Two-year-old Children," is an analytical study, by Eleanor A. Lack, of the kinds of stories preferred by two-year-olds. In a study reported by Theresa J. Peterson in Part VI, "A Preliminary Study of the Effects of Previous Nursery School Attendance upon Five-year-old Children Entering Kindergarten," no statistically dependable differences were found in the mental characteristics of children who had previously attended a nursery school and those who had not.

170. SWAN, CARLA. *Individual Differences in the Facial Expressive Behavior of Preschool Children.* Genetic Psychology Monographs, Vol. XX, No. 4. Provincetown, Massachusetts: Journal Press, 1938. Pp. 557–650.

Individual differences in patterns of expressive behavior were found to be related to body build, age, hour of the day, intelligence, and type of activity engaged in.

171. WAGNER, ISABELLE F. "The Body Jerk of the Neonate," *Pedagogical Seminary and Journal of Genetic Psychology*, LII (March, 1938), 65–77.

There is no clear distinction between the body jerk and the so-called "startle reflex." Body jerks are most frequent in sleep, general stirs when awake.

172. WELLMAN, BETH L. *The Intelligence of Preschool Children as Measured by the Merrill-Palmer Scale of Performance Tests.* University of Iowa Studies in Child Welfare, Vol. XV, No. 3. Iowa City, Iowa: University of Iowa, 1938. Pp. 150.

A critical analysis of relationships between the Merrill-Palmer test and tests of the Binet type as applied to children of nursery-school age.

173. WELLMAN, BETH L. "Mental Growth from Preschool to College," *Journal of Experimental Education*, VI (December, 1937), 127–38.

Presents data that appear to show that attendance at nursery school has an accelerating effect on mental growth, which is still evident at the college level.

NONTECHNICAL BOOKS AND ARTICLES PRIMARILY FOR PARENTS TEACHERS, AND WORKERS IN THE FIELD OF PARENT EDUCATION

174. BAIN, WINIFRED. "Problems of Home-School Relationships in Nursery School and Kindergarten," *Parent Education*, IV (February, 1938), 123–27.

Discusses the particular responsibilities of parent and teacher in the training of young children.

175. BLATZ, WILLIAM E. *The Five Sisters*. New York: William Morrow & Co., 1938. Pp. xii+210.

An account of the development and the training of the Dionne quintuplets. The book is illustrated by many photographs and charts.

176. BORGESON, GERTRUDE M. "Teachers Techniques in the Nursery School Luncheon Period," *Journal of Experimental Education*, VI (December, 1937), 167–72.

Describes the techniques actually used by teachers in two nursery schools in which both the training of the teachers and the social background of the children differed greatly. Fewer problems were encountered in the superior school —a fact that is attributed in part to the better home background of the children and in part to better handling by the teachers. Suggestions for handling feeding problems are given.

177. CLOTHIER, FLORENCE. "The Social Development of the Young Child," *Child Development*, IX (September, 1938), 285–91.

A discussion, illustrated by case histories, of the evolution of social behavior during the first six years.

178. DIXON, C. MADELEINE. *High, Wide and Deep*. New York: John Day Co., 1938. Pp. xx+300.

This book for parents and teachers is subtitled "Discovering the Preschool Child." The first of the two parts is based on observations made in a summer play group for children of preschool age, the second on observations of children in their homes.

179. FRANK, LAWRENCE K. "The Fundamental Needs of the Child," *Mental Hygiene*, XXII (July, 1938), 353–79.

Discusses the manner in which the child's fundamental drives may be brought into harmony with the rules imposed by society.

180. GESELL, ARNOLD. "The Psychological Hygiene of Infant Feeding," *Mental Hygiene*, XXII (April, 1938), 216–20.

Emphasizes the need of allowing for individual differences in planning and managing the infant's feeding schedule.

181. HURLOCK, ELIZABETH B. *Modern Ways with Babies*. Philadelphia: J. B. Lippincott Co., 1937. Pp. viii+348.

A book for parents describing the normal course of mental and physical development during the first three years of life, together with detailed advice on the care and the training of infants.

182. KAWIN, ETHEL. *The Wise Choice of Toys*. Chicago: University of Chicago Press, 1938 (second edition). Pp. x+154.

A book for parents and teachers, describing the kinds of toys suitable for children at each level of development.

183. UPDEGRAFF, RUTH; DAWE, HELEN C.; FALES, EVALINE E.; STORMES, BERNICE E.; and OLIVER, MARY G. *Practice in Preschool Education*. New York: McGraw-Hill Book Co., Inc., 1938. Pp. xvi+408.

A book on the education of young children based on the curriculum and the theories of the University of Iowa nursery schools.

184. ZECHLIN, RUTH. *How To Play with Your Child*. New York: Barrows Mussey, Inc., 1937. Pp. 128.

Games and toys suitable for children of different ages are described.

Educational Writings

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REVIEWS AND BOOK NOTES

PROGRESSIVE EDUCATION IN A LARGE CITY SCHOOL SYSTEM.—Twenty-five years ago progressive education was largely limited to small experimental private schools. Those were the days when the term "lock-step schooling" could be correctly applied to most classroom procedures. Desks and chairs were screwed to the floor; children sat at attention until permitted to speak or move; uniform lessons were assigned from day to day; and the major effort appeared to be to secure as much uniformity as was humanly possible. Instruction was largely either by eye or by ear instead of through experience. The precepts of John Dewey and the practical endeavors of men like Francis Parker, Frederic Burk, and Stanwood Cobb to develop a new way of teaching children in terms of a more liberal educational philosophy were pioneer efforts.

Here and there small private schools were organized in which teachers and pupils endeavored to chart a new path in education. These schools were small for several reasons. First, it required a courageous parent to trust his offspring to these newer experimental institutions. Second, it required a courageous teacher to undertake a liberal program, and the number of children with whom she worked had to be limited. The methods were, therefore, developed and refined for groups of twelve, fifteen, or twenty pupils.

Washburne, at Winnetka, was probably the first man to apply progressive techniques to a typical public-school situation with thirty children in a room. Since his start elementary-school teachers from one end of the land to the other have gradually adopted and adapted the techniques to typical public-school conditions. Despite the extent to which these newer practices have spread during the past decade, there are still thousands of public-school teachers who wonder how these better procedures may be made to operate in an ordinary public school.

Assistant Superintendent Lane, of the Los Angeles schools, and his co-authors, Miss Allison, Miss Bishop, and Mrs. McNary, have told in practical fashion[1] just how the practices of progressive education have been effectively incorporated in some of the public schools of Los Angeles. Their book deals simply with the educational philosophy behind the newer educational practices and, step by step, shows how this philosophy can be expressed in public-school

[1] Robert Hill Lane, with Gertrude M. Allison, Ethelyn Bishop, and Dorothy Johns McNary, *The Progressive Elementary School: A Handbook for Principals, Teachers, and Parents.* Boston: Houghton Mifflin Co., 1938. Pp. x+198+xii. $1.90.

practice in a large urban system. Not only do they offer suggestions as to what to do and how to do it, but they offer exceedingly valuable warnings as to what not to do. With all that is now being said about units of work, it is refreshing to find in their volume the statement that "it is a fatal mistake for a teacher to feel that a major interest must be going on in her room at all times in all fields and that she must always have a unit of work under way with which to control that interest" (p. 82).

While the volume is somewhat uneven in quality and unity, it is alive and readable. It should be a valuable help to teachers who are wondering what this newer education is all about. It should be useful also to school administrators who are seeking something concrete to place in the hands of their teachers which will help stimulate thinking with regard to newer educational practice.

WILLARD W. BEATTY

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A MODERN ELEMENTARY SCHOOL IN ACTION.—An interesting and detailed report is available on the evolution of a curriculum of the unit-of-work and activity type in a typical urban public school. The volume[1] has grown from the experience of an administrator and teachers who work with children of normal and below-normal academic aptitude, about 30 per cent of whom have foreign-born parents. The report differs from similar previous reports in that it deals with pupils in a typical urban public-school situation rather than with pupils in a favored suburban community or in a private school. By the use of photographs, narratives, and samples of the children's original work, a large number of actual classroom situations are presented to the readers with a detail and clarity approximating impressions gained from direct observation. Detailed step-by-step descriptions are provided, showing how a new curriculum may be introduced into the ordinary public school.

In organization and content the book is divided into two parts. In the first part both pupil and teacher personnel are comprehensively described, and the philosophy and the curriculum are presented in general terms. Such integrating influences as clubs, assemblies, traffic squad, school newspaper, and musical organizations are depicted. This part is concluded with an evaluation, mainly subjective in nature, of the school's success, judged by such criteria as the children's fondness for school, their competence in academic skills, achievements in creative expression, gains in weight, school citizenship, and their subsequent success in secondary-school subjects.

In the second part are detailed descriptions of three units, namely, "The Study of Animals," "Community of San Jose," and "European Architecture." Each unit is introduced by a narrative account of the origin and the develop-

[1] Albion H. Horrall, Lydia E. Codone, Mabel S. Willson, and Leah Smith Rhodes, *Let's Go to School: Integrative Experiences in a Public Elementary School.* New York: McGraw-Hill Book Co., Inc., 1938. Pp. xii+434. $3.00.

ment of the unit, including stenographic reports of the pupils' planning and selected samples of pupils' creative expression. Subject matter and methods in each unit are organized and discussed by the authors under four headings: "Producers' enterprises," "Consumers' enterprises," "Problem-solving enterprises," and "Specific learning enterprises." Under "Producers' enterprises" are detailed explanations of the materials and the methods used in making scenery, maps, pictorial borders, and costumes, and in reproducing written materials, producing marionette shows, and the like. "Consumers' enterprises" include records of typical class discussions, bibliographies of stories enjoyed by the children, bibliographies of phonograph and song selections, lists of visual aids, and reports of interviews with persons as these relate to each unit. "Problem-solving enterprises" include pupil-teacher planning of the unit of work and a more or less logical organization of the subject matter of the unit. "Specific learning enterprises" include a summary of specific work and study skills which pupils have practiced in the unit.

Accounts of units are written in the teacher's idiom in clear, direct, and simple fashion. Practices are illustrated by photographs, teachers' logs of activities, pupil products in drawing and writing, and stenographic records of class discussions.

This volume has certain limitations, one of which is the avoidance of any explicit discussion of the postulates of the newer educational practices. At times the authors indulge in the use of verbal "fictions," such as the abstraction which appears on pages 22 and 78 that the ultimate goal of modern education is "to make human personality." The meaning of this educational goal or "fiction" is not defined by activities or functions; hence, for the reader it lacks definitive content. On page 117 certain questionable assumptions and statements about evaluation are made, which seem more an apology for the type of evaluation used by the authors than an up-to-date statement of progressive evaluation practices.

Although the objectives of elementary education formulated in a bulletin of the California State Department of Education are accepted as the basis for the reconstructed curriculum, no attempt is made to judge the success of the new curriculum in terms of these objectives.

The evaluation data are often not convincing. Fondness for school, for example, is judged by such evidence as lack of truancy, lack of interest among boys in free tickets to a college football game when school-club activities were in session, and the fact that children wanted to work in the classroom after school hours. Health is judged by the criterion of average gain in weight, with which the school may have had little or no direct connection. This same evidence might be gathered by traditional schools and used to show the excellence of their curricular practices. More convincing evidence, however, is submitted on achievement in the three R's and in creative music, drawing, and writing.

This book may well serve as a guide for those in public schools who wish to initiate a curriculum of the unit-of-work type. The authors illustrate clearly,

concisely, and simply how they accomplished changes from a conventional to a newer type of curriculum. They offer an unusual wealth of suggestions on materials, procedures, activities, and bibliographies for the three units described in detail. Wisely the authors advise in the Preface: "The units . . . . are not given as models to be followed slavishly. They are merely examples of what can be accomplished when children and teacher together find some common interest that has sufficient breadth and depth to hold their attention for a considerable time" (p. vii).

As a handbook on newer curricular practices, realized under more than average public-school handicaps, this book deserves a wide and sympathetic reading among public elementary school teachers and supervisors.

J. WAYNE WRIGHTSTONE

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SCHOOL-ATTENDANCE WORK ON A PROFESSIONAL BASIS.—The truant officer as a bogeyman or a police officer of the worst type has long been the butt of criticism and ridicule. Professionally this school personnel officer has been considered as an unskilled, untrained worker interested in law enforcement only. No other phase of education has been so generally intrusted to untrained personnel. There has been too little thought of employing persons who could, because of training and experience, render a type of social service in connection with the school attendance of children.

Recently a comprehensive study[1] has been made of newer trends in attendance work in each of sixteen city school systems throughout the United States. These cities exemplify the newer conception—the point of view of the educator and the social worker. The study treats of the organization and the administration of the service, the type of staff engaged in the work, the supervision of the work, the contacts and the techniques of the workers, and the relations of the attendance department to other divisions of the school system. It makes an effort to identify the constructive elements which characterize the newer concept of attendance work. It shows that attendance work is a type of social service. Investigation, diagnosis, treatment, and follow-up are the steps in the techniques used in rendering this service. The attendance department should be the liaison group which integrates the school and community services in the interests of the child. It should endeavor to do something constructive *for* the child instead of doing something *to* the child.

The study is comprehensive of that which is, at the present time, the best in attendance work. From 132 attendance departments the author secured preliminary information dealing with the administrative organization of the service; the qualifications and the supervision of the personnel; the relations of the department to other school and community services; and the forms,

[1] Joseph LeMart Schultz, *An Analysis of Present Practices in City Attendance Work*. Philadelphia: University of Pennsylvania, 1938. Pp. xii+188. $1.50.

records, reports, and techniques employed in the work. From these sources he chose for intensive study sixteen cities representing the newer conception and the social-service trends in attendance procedures. Each of the sixteen cities illustrates one or more of the following phases of service: appropriateness to diagnostic and remedial attendance work of the administrative structure of the service, the co-operative relation of the attendance department with other pupil-personnel services, the supervision of the service, the scope of the service and its supervision, the selection of the personnel, and the techniques used.

The study deals not only with the theoretical phases of school attendance, as shown by the forms used, the annual reports, and the questionnaire data of these sixteen cities, but also with the actual practices of these departments of attendance. In each city several days were spent in a complete survey of the service. Using a questionnaire as a guide, the author interviewed attendance-department directors, supervisors, and workers. The information thus obtained was supplemented by the opinions of workers in other special services. City superintendents and assistant superintendents aided the author in evaluating the services rendered by the several attendance departments which were being studied critically.

This study and the literature which the author reviewed reveal that there is a definite trend from a policy of legal enforcement to that of social service, that the personnel officer in the attendance department must be thoroughly trained for the work, and that those departments which are accepting the newer concepts in attendance service are meriting professional rating by school administrators and by the community agencies dealing with social welfare.

The study is clearly written. It summarizes trends in attendance work which are not generally known to educators or to lay persons who seek to co-operate in the general community interests of children. It should be stimulating reading and a valuable guide to school administrators who are desirous of improving the services of this department in their school systems.

The contents of the eleven chapters, the thirty-one tables of data, and the appendix material constitute a source book of techniques, reference, and information which is a valuable addition to the current literature on school-attendance work.

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EXPERIENCE AS EDUCATION.—Since life is made up mostly of living and since education is designed to help persons to improved living, we may expect that in time, as education gets its bearings, it will devote its energies mostly to preparing persons for proficiency in their activities. Since the first family trained its children for their life-activities, this emphasis has been nothing new to the world. Aristotle in his *Politics* expressed the activity concept as clearly as it can be found in the literature of today. Because the schools, with their

bookish substitute for living, have so long been in custody of education, the profession had, until recently, mostly forgotten that life is the way to learn to live. During the past few years, however, the profession has again been discovering activity as end and process of education. It is high time.

A recent book,[1] by a writer who has been long and favorably known, presents in simple and clear fashion the theory of the current form of activity movement as it exhibits itself today in the more progressive elementary schools. The chapter on the curriculum enumerates the wide and varied range of seventy-six types of activity that are practicable for the school program. The other eight chapters are largely devoted to explaining the justifications of these activities and the ways in which they are to be managed in order that they may be most effective in accomplishing desirable results.

The curriculum is to be self-directed living by the pupils under the wholesome and stimulating conditions provided by the school. Under the leadership and guidance of the teachers, the children are to live together as a social group and to share in the great variety of developmental experiences appropriate to their degree of maturity. The volume discusses all the basic factors that enter into this type of education.

Writers quoted with wholehearted approval are such as Dewey, Kilpatrick, Mary P. Follett, Francis W. Parker, Pestalozzi, Froebel, Comenius, Locke, and Rousseau.

Although the book presents the doctrine of the ultra-progressives, its words in almost all cases have their regular dictionary meanings, so that the book can be read with understanding by those outside the circle of the initiate. No book has come to the reviewer's hands which states the progressive doctrine more straightforwardly and clearly. It is, however, a sketch, not a treatise. Its aim is to portray the fundamentals in a brief and concise presentation.

FRANKLIN BOBBITT

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SAFETY READERS.—The Road to Safety Readers[2] have been produced to meet the growing demand for instruction in safety. The types of safety dealt with center in eight problems: school safety, first aid, safety out-of-doors, fire prevention, street safety, home safety, winter safety, and vacation safety. More definitely the problems considered have to do with experiences of children

[1] Lois Coffey Mossman, *The Activity Concept: An Interpretation.* New York: Macmillan Co., 1938. Pp. xviii+198. $1.50.

[2] Horace Mann Buckley, Margaret L. White, Alice B. Adams, and Leslie R. Silvernale, The Road to Safety: Book A, *Away We Go*, pp. 56, $0.15; Book B, *Happy Times*, pp. 138, $0.42; Book C, *In Storm and Sunshine*, pp. 152, $0.48; Book D, *In Town and Country*, pp. 216, $0.54; Book E, *Here and There*, pp. 286, $0.54; Book F, *Around the Year*, pp. 346, $0.57; Book G, *On Land and Water*, pp. vi+358, $0.60; Book H, *Who Travels There*, pp. viii+440, $0.66. Chicago: American Book Co., 1938.

on stairways, on sidewalks, on doorsteps, and on streets, as well as many other situations of a similar kind in which problems of safety occur.

Certain types of safety—fire and traffic, for example—are considered sufficiently important to be included in most, if not all, of the books. Safety problems arising from fire are viewed from many standpoints, beginning in the simplest book with a mere suggestion of danger by means of a picture of an open fireplace and ending in one of the more advanced books with a discussion of the reasons why firemen break windows or chop holes in the roofs of burning buildings. Other types of safety, as that which has to do with lightning, are treated in only one book. The wide range of topics dealt with and the extensive treatment of certain of these topics are evidently intended to impress the child with the importance of safety in our modern complex civilization.

As these books have little to indicate the school grade for which any single reader is intended, children in the upper grades will read the easier textbooks without feeling a let-down in intellectual dignity. Since a full understanding of the passages is highly desirable in dealing with safety, the vocabulary of the books, according to the accompanying statements of the publishers, is less difficult than might be expected in a basic series.

Much of the material is of the narrative and adventure type. Certain of the selections, such as "The Seeing Eye," will be interesting to many children. A large number of illustrations are used, many of which are in color; not a few are evidently the product of excellent artists. In many cases the pictures seem to make a contribution in emphasizing the need for safety.

What possibilities have such readers in a safety program? Safety is probably partly scientific and partly psychological. It seems to involve attitudes, feelings, and character traits. According to present-day theories, an excellent method for teaching most, if not all, phases of safety is through activity programs. Such activities will often be best when they are related to the child's reading. From this standpoint the present readers should be especially helpful in those schools without adequate library facilities, and in other schools they should be of distinct aid in that they make vivid many of the problems of safety and in that they make conveniently available a body of material on many problems of safety. One criticism of the readers which I have encountered, in discussing these books with well-trained, experienced teachers, relates to the moral teachings that are drawn from certain selections.

By way of estimate, I would suggest that most elementary-school teachers charged with teaching safety will want to examine the series carefully with a view to using one or more of these readers.

C. T. GRAY

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MATERIALS FOR USE IN SOCIAL STUDIES.—Some vital and interesting social-studies materials have become available for use in the intermediate grades.[1] The authors are H. B. Bruner, who is a widely known authority in the curriculum field, and Mabel C. Smith, who has had a broad background of experience in teaching and research.

The books are organized on a distinctly functional basis rather than on the plan of the conventional history or geography textbook. Following the now popular unit plan of organization, the books present an intensive study of a few important topics rather than a brief encyclopedic treatment of many subjects. The schedule of units is as follows: Book I, "The Story of Agriculture," "The Story of Fire," "The Story of the Sea," and "The Story of Writing"; Book II, "The Growth of the City," "Feeding the Millions," and "The Story of Clothing"; Book III, "The Story of Tools and Machines," "Transportation and Communication," "Conserving Our Natural Resources," and "What Is Money?"

Bruner firmly believes that young boys and girls should be interested in current problems and that they can discuss intelligently the real, live, social issues of the day. His belief is substantiated by material which he has collected through actual contacts with boys and girls in many cities where he has served as curriculum consultant.

The authors have done an exhaustive piece of research in collecting materials about each of the topics treated, and their admirable presentation of the topics furnishes ample proof of their scholarship and writing ability.

Are history and geography entirely ignored in this series of social-studies books? Absolutely not! The influence of our social heritage is a dominant theme which pervades all the units. In each unit the historical background of man's activities today is carefully developed. The origins of fire, agriculture, transportation, and communication, for example, are traced as far back as man's records go and, through the clever imagination of the authors, even into prehistoric times. Pupils will certainly gain an understanding of the slow but definite progress of civilization and develop an appreciation of the contributions which the people in times past have made to modern life.

With respect to geography, the influence of the physical environment on the life of man is another basic theme which has been prominently discussed in each of the units. Through pictures and verbal illustrations the life of people in typical regions is introduced incidentally in connection with the development of the various units. For example, life in Egypt is clearly described in connection with the unit on agriculture, life in ancient Greece in connection with the unit on the growth of cities. In like manner, pupils will obtain, in connection

[1] Herbert B. Bruner and Mabel C. Smith, *Social Studies:* Intermediate Grades, Book II, pp. viii+472, $1.20; Book III, pp. viii+568, $1.40. New York: Charles E. Merrill Co., 1938.

with the different units, a rather comprehensive picture of life in the United States and in typical regions of the world.

How can these books be most effectively used? In schools in which an integrated or correlated social-studies program has been organized on a functional basis, these books could well be provided as basic material. In schools where a more traditional program in social studies is followed, ten to fifteen copies of these books in a classroom would provide excellent supplementary material for use in connection with a textbook in history or geography.

Certainly the availability of materials of this type will further the trend toward a better unified and a more functional social-studies program.

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